

China Insights

Fang Cai

Demystifying China's Economy Development

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Fang Cai

Demystifying China's Economy Development



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Preface

Modern China, since the Opium War, has dropped far behind and suffered from attacks and bullies. “Inferior technologies, systems and culture” becomes a prevailing cultural psychology among most Chinese. Changing the pattern that “China is comparatively weaker than western countries” and reinvigorating China start from cultural criticism and innovation. Since then Chinese has begun to “open their eyes to see the whole world around” and learnt from Japan, Europe, America and Soviet Russia. We are in tension and anxiety for long, dying to get over from being behind and bullied, poor and weak and surpass Western powers. As it were, in the pursuit of dream of power nation and national rejuvenation for the last century, we focus on understanding and learning but do a little even nothing to get understood. It has no significant changes even in the modernization evolvement after China’s reform and opening up in 1978. Such phenomenon is well demonstrated by a great amount of translation of western writings in 1980s and 1990s. This is how Chinese perceives the relation between China and the world in modern times.

At the same time when Chinese is pursuing for the dream of power nation and national rejuvenation in modern times, they are also trying to seek for **DAO** to rescue from national subjugation and get wealthy and powerful by “material (technology) criticism”, “institutional criticism” and “cultural criticism”. **DAO** is firstly a philosophy, of course, as well as a flag and a soul. What philosophy, what flag and what soul are critical to resist national destruction and get wealthy and powerful? For over a century, Chinese people keep exploring and attempting in disgrace, failure and anxiety, and have undergone the phase of “western learning for practical application while Chinese learning as basis”, the failure of constitutional monarchy practice, the bankruptcy of western capitalist politics and the major frustrations of world socialist movement in early 1990s, but finally harvest Chinese revolution success, national independence and liberation, especially combine scientific socialist theoretical logic with Chinese social development history logic together and find out a Chinese socialism modernization path – a path of socialism with Chinese characteristics. After the reform and opening up in recent 30 years, China’s socialism market economy has got rapid development; economic, political, cultural and social construction have made tremendous achievements; comprehensive national strength,

cultural soft strength and international influence have substantially improved; the socialism with Chinese characteristics has made huge success; although not perfect, the institutional systems are generally established. China, a dream catcher for last century, is rising among the world nationalities with more confidence in unswerving path, theory and institution.

Meanwhile, we should be aware that the long-developed perception and the cultural mental habit of learning from the West constrain Chinese from showing “historical China” and “contemporary real China” to the world, although China has risen to be one of the current world powers. Western people and nationalities, influenced by the habitual history pattern that “China is comparatively weaker than western countries”, rooted in Chinese and western cultural exchange, have little knowledge of China’s history and contemporary development, let alone China’s development path, as well as cognition and understanding of philosophical issues such as scientificity and effectiveness of “China theory” and “China institution” on China, and their unique values and contributions to human civilization. The omission of “self-recognition display” leaves much room for malicious politicians to wide spread “China collapse”, “China threat” and “China national capitalism”.

During the development process of “crossing a river by feeling the way over the stones”, we concentrate more energy on learning from the West and understanding the world, and get used to recognize ourselves by western experience and words, but ignore “self-recognition” and “being understood”. We blend ourselves into the world more forgiving and friendly, but are not objectively or actually understood. Hence, just and responsible academic and cultural researchers should undertake the important assumptions to summarize **DAO** of successful socialism with Chinese characteristics, narrate China stories, illustrate China experience, use international expressions, tell the world the real China, and let the world acknowledge that western modern pattern is not the end of human history and the socialism with Chinese characteristics is also a valuable treasure of human thoughts.

Chinese Academy of Social Sciences organizes leading experts and scholars and some outside experts to write series of *Understanding China*. These books introduce and summarize China path, China theories and China institutions, and contain objective description and interpretation to modern development in aspects of political system, human right, law governance, economic system, economics, finance, social administration, social security, population policy, value, religious faith, nationality policy, rural issue, urbanization, industrialization, ecology and ancient civilization, literature and art.

These published books are expected to let Chinese readers have better understanding of China’s modernization process in the last century, and more rational concepts on current troubles; intensify the overall reform and national confidence; agglomerate consensus and strength for reform and development; improve foreign readers’ understanding of China and create more favorable international environment for China’s development.

Beijing, China
January 9, 2014

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Chapter 1

It Takes 30 Years to Reach Benevolent Governance

Confucius said: “A kingdom must wait for 30 years to reach benevolent governance.” The 11th generation of Confucius, who was also an authoritative scholar of the Confucius Classics in Western Han, Kong An’guo, interpreted this sentence as, “A generation may include thirty years, which is the period that a government must need to reach benevolent governance.” That is to say, 30-years, which could be called a generation, is a period of time that can previews effectiveness of benevolent governance. The reform of China, staring from the Third Plenary Session of the 11th Central Committee of the Chinese Communist Party in 1978, has been performed for more than 30 years. During this period, China has undergone tremendous changes comparing with the last several thousand years in the Chinese history, which is rather rare in the world economic history as well.

The most prominent manifestations of China’s achievements in reform and opening up are the general improvement of people’s livelihood. To be specific, in the process of economic growth and overall improvement of income, the government has implemented a large-scale rural poverty reduction program to solve the “issues of agriculture, farmer and rural area”; while promoting the expansion of urban and rural employment, the government also tries to strengthen the labor market regulation and build the initial social protection mechanisms to provide a basic safety net for the vulnerable groups in the labor market. These undisputed facts show that during the 30 years, China’s economic and social development is an inclusive style. However, the improvement speed of the living standards of urban and rural residents still varies, so does the degree of social protection improvement. They are shown in the income gap among residents and the expanding inequality in accessing to basic public services. These are the policy challenges that cannot be avoided.

1.1 Doubling of Per Capita Income

Throughout the whole reform and opening up period to date, namely 1978–2011, China's economic growth rate maintained at an annual rate of nearly 9.9 %. Not only just the total economy, its per capita income growth is also a miracle. During this period, the average annual growth rate of per capita GDP reaches 8.8 % excluding inflation factor. According to the Thumb Rule in statistics, the average annual growth rate of 7 % can achieve a doubling of per capita GDP in 10 years, while the average annual growth rate of 10 % would do so in 7 years. So we can imagine what kind of effect may be achieved when these per capita GDP growth rate continues for 30 years.

Let's compare the time needed for doubling per capita income in different countries in a similar stage of development. Britain took 58 years in 1780–1838, the United States spent 47 years in 1839–1886, Japan used 34 years in 1885–1919, and for South Korea, it was 11 years in 1966–1977. China took only 9 years in 1978–1987, and then in 1987–1995 and 1995–2004, using 8 years and 9 years respectively, it achieved doubling twice, and in 2011, only 7 years after the last doubling, it did it once again.

Economic historians found that since the late eighteenth century, i.e. around the Industrial Revolution, the world has experienced the “Great Divergence” in the country's level of development, followed by the formation of the distinction of rich and poor countries. Since then, the pattern has been unchanged. Thus, the persisted passion and motivation of the economists engaging in research is to explore the way how the developing countries can catch up with and even surpass the developed countries in terms of per capita income. The key lies in the ability to have a faster rate of economic growth, and maintain it over a longer period of time. For those low-income countries, if they can maintain the high enough growth rate in a long term, they will undoubtedly create economic miracles.

In 1990, China's total GDP only ranked 10th in the world. In 1995, China surpassed Canada, Spain and Brazil, ranked 7th. In 2000, China surpassed Italy and was promoted to the 6th. Subsequently, in the first 10 years of the twenty-first century, China has successively surpassed France, Britain and Germany, and finally Japan, to become the world's second largest economy in 2010, just ranked after the United States. In 2011, China's total GDP was US\$7,298,150,000,000, equivalent to 48.4 % of that of the U.S. and 10.5 % of the world. China, in 30 years of time, has significantly reduced the gap between it and the developed economies in levels of development and quality of life. This experience has fully proved that as long as they choose the right direction, which is persisting in reform and opening up policy and promoting economic development, the relatively backward countries can still achieve catching-up.

When the total GDP is created, the factors that determine the share level of economic growth are how to allocate the GDP between various factors of production, between the parties of the economy, e.g., between capital and labor elements, or between laborers, operators and the state government. In other words, to judge

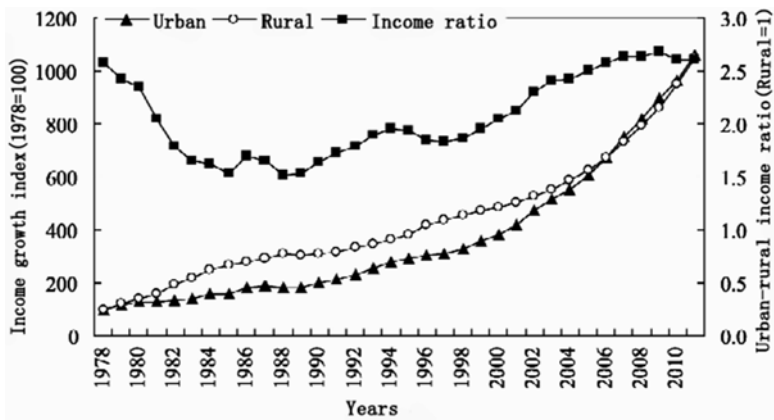


Fig. 1.1 The gap between urban and rural residents' income growth (Data source: National Bureau of Statistics, *China Statistical Yearbook*, relevant years)

whether the economic growth can really benefit people's livelihood, in addition to observing the growth rate of per capita GDP, we should also study the growth rate of urban and rural residents' income.

As we can see from Fig. 1.1, during the 33 years from 1978 to 2011, the real income of urban and rural residents have improved at an alarming rate, with average annual growth rate of 7.4 % after excluding the price factor. Meanwhile, in the 1980s, the per capita net income of rural residents improved faster than the per capita disposable income of urban residents. From the 1990s, the increasing speed of rural residents' income lagged behind the one of urban residents; while after 2004, the income of rural residents once again picked up a higher speed, and gradually showing faster trend than the one of urban residents.

As shown in Fig. 1.1, we can also see an often-overlooked fact. The researchers used to fiercely criticize the income gap between urban and rural areas. But in fact, it is not generally that serious. The usual method of calculation is to set the rural residents' income as one, then calculate the ratio between the nominal annual income of urban and rural areas. According to this method, in 2011 the nominal income of urban residents was 21,810 yuan, while the nominal income of rural residents was 6,977 yuan, and the urban-rural income ratio was 3.12, which was no doubt higher than 1978's figure 2.57, and was much higher than the smallest income ratio between urban and rural of all time in 1983 (1.82). However, due to the different cost of living and range of price changes in rural and urban areas, this method, which based on urban-rural income ratio of nominal income but ignores the price factor, is unscientific.

After adjusting the method according to different consumer price index in rural and urban areas, we have calculated the number of comparable urban and rural incomes, and the urban-rural income ratio. The observation of the urban-rural income ratio suggests that, firstly, in 2011 the urban-rural income ratio was 2.61, only slightly

higher than the one in 1978; secondly, the income gap is still much higher than the 1.50 in 1988, showing that the income gap has experienced a process of U-shaped change, i.e., it has significantly decreased after the reform, and then expanded again; thirdly, the current urban-rural income gap has been narrower than the level of 2007–2009, showing a reduced trend.

Moreover, the existing statistical system in the household survey has omitted the income of rural migrant workers. Therefore, the income gap between urban and rural areas shown in Fig. 1.1 still contains overvalued ingredients. As the official statistical system in the household survey is conducted independently of urban and rural areas, the rural households and family members who moved to cities are hardly to be included in urban samples. Also, because of their long-term being out, they are no longer seen as rural residents, and are excluded from the surveyed sample of rural households.

Some of my colleagues have no doubt noticed the existing defect of urban and rural household income statistics. They try to dig out related evidence from the imperfect statistical system and tell us a more truthful income gap between urban and rural areas. They chose a developed province, Zhejiang, and a western province, Shaanxi. With the accounts from samples of the Statistics Bureau and the surveys of selected households, they revalued the income of migrant workers, which was previously omitted in both the urban and rural income sample scope. Their conclusion was that only with the unscientific household survey sampling and definition, the average disposable income of urban residents was overvalued by 13.6 %, the average net income of rural residents was undervalued by 13.3 %, and the average income gap between urban and rural areas was overrated by 31.2 %.¹

1.2 Worldwide Example of Poverty Reduction

Since China adopted the reform and opening up policy, it has not only achieved the world's most rapid economic growth and maximized the improvement of its people's living standards, but also achieved the world's largest scale of poverty reduction. In 1978, when the poverty line was determined according to Chinese government statistics as 100 yuan per person per year, the number of poor people was 250 million, accounting for 30.7 % of the total rural population. In 1984, the poverty line increased to 200 yuan per person per year, the number of poor people went down to 128 million and the poverty incidence rate decreased to 15.1 %. Furthermore, according to the 2010 statistics of poverty standard, i.e., 1,274 yuan, the rural poor people reduced from 94.22 million in 2000 to 26.88 million in 2010, and accordingly, the poverty incidence rate declined from 10.2 to 2.8 % (Fig. 1.2).

In 2011, the central government significantly improved the national poverty line to 2,300 yuan, on the basis of constant price in 2010, increasing by 92 % than 2009. The introduction of this new standard enlarged the coverage of poor people from

¹ Gao Wenshu et al. (2011).

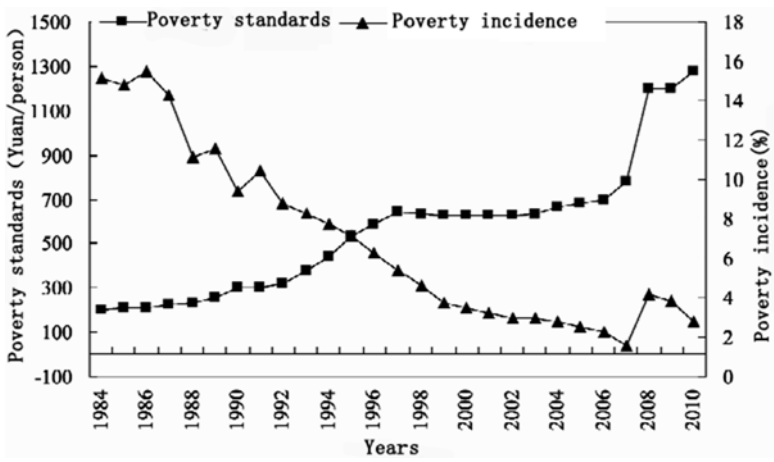


Fig. 1.2 Improve the poverty standards while decline the poverty incidence rate (Data Source: National Bureau of Statistics 2012)

26.88 million in 2010 to 128 million. In accordance with international comparable purchasing power, this new poverty standard was equivalent to US\$1.8 per capita per day, and surpassed the World Bank’s international poverty standard of US\$1.25 in 2008.

China’s achievements of poverty alleviation and its overall development of the Millennium Development Goals have been widely praised by the international community. The World Bank believes that China’s achievements in poverty alleviation have profound impact on the international community. UNDP also believes that China’s achievements in poverty reduction have provided a model for developing countries and even the whole world. The Asian Development Bank thinks that China has a lot of experience to offer in poverty alleviation, and it is worth learning for other countries. China’s achievements in poverty reduction are top ones in Asia, and the Chinese government can be proud of them. These international institutions recognize that during the late 30 years, among the achievements mankind made in poverty reduction, two-thirds should be attributed to China. This is a great contribution China made to international poverty alleviation, as well as to human civilization and progress of mankind.

Recalling the years of development in rural China, the process of poverty alleviation can be divided into three stages. The first stage is the period from the early 1980s to the mid-1980s. Comprehensive reform of the rural economic system has become the main driving force in this period to promote the rapid development of national economy. The overall income growth of rural residents has become a major factor in poverty reduction during this period.

From 1978, the farming system has undergone major changes. The household contract system replaced the collective management system of people’s communes, which greatly aroused the enthusiasm of farmers. This, together with the rising of agricultural prices, the accelerating agricultural restructuring and rural

industrialization, etc., promoted a comprehensive rural economic growth. Rural enterprises, on behalf of rural industrialization, began to develop during this period. These not only enhanced the vitality of the rural economy, but also expanded the employment opportunities for a number of knowledgeable, skilled labor force in rural areas to achieve poverty alleviation. This round of economic growth was mainly achieved through institutional innovation of solving the problem of microscopic individual incentives. Therefore, the gains quickly passed on to the poor, and the rural poverty was significantly alleviated.

During 1978–1985, the national agricultural added value grew by 55.4 %, the agricultural labor productivity increased by 40.3 %, the agricultural comprehensive purchase price index increased by 66.8 %. The estimated increase of farmers' income because of higher prices accounted for 15.5 % during this period. In the same period, along with the rapid growth of various agricultural production, rural per capita net income increased 2.6 times, and the farmers' per capita calorie intake increased from 1978s 2,300 kcal per person per day to 2,454 kcal in 1985. During this period, the rural population living below the absolute poverty line decreased from 250 million at the beginning of reform and opening up to 125 million in 1985, dropped to 14.8 % in the proportion of the rural population; the poverty reduction in average was 17.86 million per year. This is undoubtedly the world's largest and fastest poverty reduction process.

The mid-1980s to the late twentieth century can be seen as the second phase of the implementation of poverty reduction. The Chinese government set up special poverty alleviation agencies, arranged special fund in multi-channel, developed special preferential policies, and radically reformed the traditional relief approach and identified the poverty development policy. By taking special policies and measures, the government organized large-scale development-oriented poverty reduction. This stage can be seen as the government's poverty alleviation efforts for specific populations in rural areas with two special experiences.

Firstly, after determining the overall idea of the regional development-oriented poverty reduction, in order to focus on the use of anti-poverty funds and effectively support the poor, the Chinese government has formulated a national standard for poverty-stricken counties. In 1986, the Chinese government determined the national standard for poverty-stricken counties for the first time: the counties whose per capita net income of farmers was lower than 1,150 yuan. Since then, because of the economic development, especially the improvement of economic conditions in poor areas, the standard must make timely adjustments. Back in 1986, 592 national poor counties were established, accounting for nearly one-fifth of the county-level administrative units in the whole country.

Secondly, in 1993, China formulated and issued the Seven-Year Priority Poverty Alleviation Program. The program strived to basically solve the problem of food and clothing of the 80 million rural poor people in the last 7 years of the twentieth century. This program tried to make efforts in a special way by the use of China's mobilization force and high level of consensus to achieve maximum effect in poverty reduction in a relatively short period of time. In 1997–1999, China had an annual eight million poor people whose problem of food and clothing were solved, the highest level since the beginning of 1990s.

By the end of 2000, the national Seven-Year Priority Poverty Alleviation Program was basically achieved. In those 7 years, China's rural poor population decreased by 50 million, the poverty incidence rate in rural areas was further reduced from 8.7 to 3.4 %. This was a strong impetus to the second phase of the poverty reduction. From 1986 to 2000, the per capita net income of farmers in the state-supported poor counties increased from 206 yuan to 1,338 yuan, and the national poverty population from 131 million to 32.09 million.

Alleviating rural poverty is not only reflected in the measurement of income and the decline in poverty incidence rate, it is also reflected in the development of human development and various social undertakings in poverty-stricken areas. During this period, the basic infrastructure in poor areas significantly improved. Transportation, communications, electricity, schools, etc., had reached an ownership rate close to the non-poor areas. With the government's poverty alleviation efforts, the overall distribution of rural poverty significant changed with more obvious regional features. Poverty was more concentrated in some areas with harsh natural conditions in the Midwest.

With the basic completion of the Seven-Year Priority Poverty Alleviation Program, the Chinese government's poverty alleviation efforts entered the third stage. In 2011, China embraced a new stage of poverty alleviation and development. In the economically developed eastern regions, the incidence of poverty has been significantly reduced. Accordingly, with the new feature that the poor were mainly concentrated in the Midwest, but still distributed across the country, the government identified 592 key counties for national poverty alleviation and development in the Midwest. In 2002, the absolute poverty population in the key counties accounted for 62.1 % of the total national population, and the low-income population accounted for 52.8 %.

Since 2000, the incidence of poverty in rural areas has basically remained at the same level. In the next 10 years, China achieved a total poverty reduction of 5.21 million. Taking into account the increasing national poverty alleviation funds invested annually, this means that the regional development plan had no longer clear poverty reduction effect as before. The nature of rural poverty was mainly marginalized poverty. Poverty due to geography, climate and other natural conditions, as well as chronic poverty caused by personal ability, has become the main features of the marginalized poverty.

In this case, the means of combating poverty was also facing a relatively big adjustment. It has been difficult to benefit the poor through regional targeting to promote local economic development. Clearer and more direct measures would be the main means to solve rural poverty.

In 2001, the Chinese government formulated and promulgated the Outline of China's Rural Poverty Alleviation and Development (2001–2010). One of the notable features of the Outline was reaching down to the village, known as the "poverty reduction strategy in village level". After entering the new century, the nature of rural poverty began to change. Even within the poverty-stricken counties, the differentiation of the poor and non-poor has become increasingly evident. Whether the use of the poverty relief funds and the regional economic growth can truly benefit the poor has become an increasingly prominent problem.

Therefore, the pro-poor policies should narrow the scope to improve the efficiency in the use of funds so that resources can really benefit the poor. In this case, from 2011 the government identified a number of key poverty-stricken villages within the range of poverty-stricken counties, and it has identified 148,000 poor villages nationwide. With this more detailed screening, the efficiency of poverty alleviation was improved.

Through the implementation of the Outline, various social undertakings have made great progress in poverty-stricken areas. During this period, the whole village poverty alleviation effect was very significant. The household income growth rate in the key villages was significantly higher than its county, and even higher than the national average. In poor villages, income growth of those villages that were involved in the program was 8–9 % higher than those who were not. There were also significant improvements in productive infrastructure and social services facilities in poor villages, and the improvement speed was faster than the average rate in poor counties.

By the end of 2010, with a further decline in the poor population and being the first to achieve the UN Millennium Development Goals of halving poverty target, China began implementing the China Rural Poverty Alleviation and Development Program 2011–2020. It substantially increased the poverty standards and identified contiguous areas with special difficulties as the focus of poverty alleviation to provide stronger policy support and financial support for poverty alleviation work in these areas. Meanwhile, China increased the poverty line above the international standards. This not only showed that the government improved its own responsibility in resolving poverty by including more low-income rural population into the range of poverty and giving greater support to poor areas and poor people, but also that China's poverty alleviation strategy began to realize from the eradication of absolute poverty to addressing the relative poverty at the same time.

1.3 China's Featured Policies of Agriculture, Farmer and Rural Area

While the Third Plenary Session of the 11th Central Committee of the Chinese Communist Party was held in Beijing (Winter 1978),² 18 farmers in the Village of Xiaogang in Fengyang County of Anhui, faced a condition of how to deal with famine and hunger: to go out as previous years and became beggars, or to break through the institutional cage and contract the land to household operations. Eventually they chose to take political risk to be the first ones who engaged in a household responsibility system. The results were immediate: their problem of food and clothing were quickly solved. The effects spread like wildfire. Subsequently, with the gradual relaxation in the policy, family contract system was rapidly adopted

²The meeting re-established CPC's ideological line of emancipating the mind and coming down to earth. It is considered to be an important milestone that marked the start of economic reforms.

across the country. Early in 1980, there were only 1.1 % of the production teams that implemented the household contract responsibility system. In the end of that year, the number reached 20 %. By the end of 1984, it reached 100 %, and the implementation of the contract system of households reached 97.9 %.

The implementation of the household contract system, i.e. farmers abandoning the distribution methods of production team and choosing household-based method of production is a fundamental change in the basic operating system of agriculture. At the same time, by raising the price of agricultural products as well as changing a series of agricultural acquisition system, the country provided an effective incentive for agricultural production. Since this step of reform achieved good incentive effect, the agricultural production has quickly restored. Farmers benefited from this reform, while the provision of agricultural products for non-agricultural sectors and the urban residents were also greatly assured.

Furthermore, due to improvement of the labor enthusiasm and micro efficiency, the use of labor in agriculture has been greatly reduced, showing a surplus agricultural labor force. It has flowed from simple food plantation to a more diversified production, such as forestry, animal husbandry and fisheries, and then to the rapid growth of the rural enterprise. Therefore, this step of reforms was achieved by improving the incentives and the liberation of factors of production, to improve potential of efficiency in the rural population itself.

However, the effect of the household contract system that improves production efficiency is a one-time shot. It seized to provide positive impact in the mid-1980s, when almost all the production teams and rural households adopted the system nationwide. Many scholars regarded 1985, in which the agricultural improvement slowed down, as a symbol of the end of the first round of reforms in rural areas. However, there were a number of other factors that maintained the momentum of effects in increasing farmers' income and production efficiency in the late 1980s. One of the most note-worthy factors was that under the system of price signals, the large-scale labor force reduced from food plantation transferred to broader areas of production; the internal rural economic efficiency won opportunities to obtain more comprehensive development, with the rural labor force more fully utilized, so that the process of farmers' income increasing, and the income gap between urban and rural areas decreasing could be maintained.

Overall, the rural reform in that period mainly focused on improving the incentive mechanisms in agriculture and the allocating efficiency in the rural economy, and did not reach another pole of the urban-rural relations, i.e. the urban residents' vested interests. When the focus of reform shifted to state-owned enterprises of the urban economy, it was inevitable to use the results of the rural reform, i.e. an adequate supply of agricultural products and the stability of rural economy, but at the same time tried not to damage the established pattern of relations in the city and rural interests. Thus, during the process of urban reform, the rural reform seemed to have been weakened, and farmers' income growth also slowed.

By reviewing the discussion then, we could see that there were a number of factors that indicated the agricultural production, farmers' income and rural development had been constrained while the relationship between urban and rural areas

had not undergone a fundamental change. For instance, in 1985, while the reform on food purchase system had greatly lowered the price of extra food volume, it was not able to really free the grain market, which showed a negative signal for agricultural producers. In addition, this period also showed a trend of faster price increase of the agricultural production inputs than the agricultural products, as well as the government's reduction in agricultural inputs, etc. Throughout the 1990s, the proportion of state investment in agriculture in the total fiscal expenditure showed wandering and slightly falling trend.

However, the process of obtaining benefit of institutional change through reforms itself has spontaneous and irreversible effect. The Chinese farmers, who were still constrained by the system when the state's policies of agriculture, farmer and rural area, and direct investments that were meant to adjust the urban-rural relations didn't reach a satisfactory degree, continued to look forward to economic opportunities to realize their productive potentials and increase their income. This has promoted the change of the traditional pattern of urban-rural relations at an alarming speed.

The main force driving this change was the mass transfer and inter-regional flow of rural labor force, which contributed to the integration of urban and rural labor markets to achieve the reconfiguration of resources in a growing range. Econometric analysis shows that during the reform period of 1978–1998, in the up to more than 9 % of average GDP annual growth, the expanding of labor contributed a share of 24 %, human capital 24 %, and the labor shift from agriculture to non-agricultural industry 21 %.³

The local governments, especially in areas of labor inflows, are often worried that the inflow of the rural labor force will result in the loss of social welfare from the local financial subsidies, and that foreign labor will impact local employment. In this case, they would adjust their attitudes towards foreign labor according to changes in the employment situation and thus form instability in policy. However, labor mobility will eventually show a positive effect because of the cities' demand for labor in economic growth. Therefore in most cases, urban governments are holding at least tolerate attitudes towards foreign labor inflow.

In addition, with the tendency to coordinate the development of urban and rural and regional development balance, the central government, in most years, regards the rural labor mobility as a positive phenomenon, makes gradual relaxation of labor mobility policy for rural migrant workers residence, and creates better policy environment for them. Throughout the 1990s, the central government and local governments have introduced and tested a variety of reform measures, making efforts in favor of labor mobility.

Such policy changes to promote cross-regional flow of rural labor are the result of interaction or game between several subjects. This interaction occurs between the labor outflow governments and the labor inflow governments, between local governments and central government, between mobile labor force and urban local labor force, as well as between the two categories of workers and the government.

³Fang Cai and Wang Dewen (1999).

Overall, the policy adjustment process is also residing in the reform into economic development, and following the “Pareto Improvement” principle.

Because of the unlimited supply of labor and the household registration system, migrant workers, despite some discrimination in wages and benefits, with the expansion of the scale of labor mobility, obtained constantly expanding income from their urban jobs. On the other hand, migrant workers also fill the gap of urban employment. They have made an important contribution to the local economic and social development, and thus to the overall development of China's economy. Urban residents, local and central government undoubtedly benefit greatly.

However, the transfer of rural labor to urban areas is eventually subjected to the constraints of the traditional pattern of rural and urban relations. In the Planned Economy period, the employment of urban workers was arranged by the city plan. No matter how bad the labor attitudes were, and regardless of business conditions, the urban workers were not in danger of being fired. Social security welfare of the workers and a considerable portion of benefits were provided through their working units. The basic education was provided in accordance with the household registration by the urban community. Urban infrastructure and a series of public services all included government subsidies.

All these aspects have severely restricted the thoroughness of the transfer of rural labor to urban cities, and thus delayed the reform of the household registration system. This results in the circle of flow of rural labors like migratory birds, making the enlarging group of people become marginalized in the city. At this stage of the reform, unequal resource flows and unequal public services are still maintained, and in some ways even expanded.

Scholars have estimated on the free transfer of rural resources to the cities in various forms throughout the period of Planned Economy, and the figure sums up about 600 billion to 800 billion yuan.⁴ Even during the reform period, this situation of resource flowing from agriculture and rural areas to non-agricultural industries and urban cities was not reversed. During 1980–2000, with a set constant price as in 2000, it has drawn 1.29 trillion yuan surplus from agriculture to various channels for industrial development. If viewing from the urban-rural relations, about 2.3 trillion yuan capital flew from rural to urban sectors.⁵

Meanwhile, in 2000, the ratio of first industry in GDP fell to 15.1 %, and the first industrial labor force in the proportion of the labor force dropped to 50.0 %. According to the experience of Korea and China's Taiwan, the Chinese mainland has reached the stage of implementing the policies of “cities supporting rural areas, industry nurturing agriculture”.⁶ In the twenty-first century, especially since the 16th CPC Congress held in 2002, along with in-depth implementation of the “people-oriented” concept of scientific development and the practice of building a

⁴Fang Cai and Lin Yifu (2003).

⁵Jikun Huang et al. (2008).

⁶In Korea and China's Taiwan, this change has taken the form of agricultural protection in the 1970s, when the proportion of the agricultural output and labor proportion dropped down to 1/4 and 1/2. See Anderson and Yujiro Hayami (1996, Chapters I and II).

harmonious society, China has entered a phase of comprehensive reform of urban-rural relations. In this stage, the content of rural reform was very rich and constantly expanded.

The greatly strengthened national finance is the important material security to implement the “giving more, taking less” policy in agriculture, rural areas and farmers, as well as the key to completely change the pattern of urban-rural relations. The reform, aiming to resolve these long-standing rural issues, was initially based on the implementation of “cities supporting rural areas, industry nurturing agriculture” policy. Then, it was implemented in the specific form of “building new socialist rural areas”. After proposing the aims of “progressive production, affluent life, civilized village, clean and tidy environment and democratic management”, the connotations of rural reform was further focused on more infrastructure and public finance to rural areas, as well as coordinating urban and rural employment and social security.

So far, this round of adjustment of urban-rural relations has made a series of major reforms that achieve milestone effects in a short period of time, such as creating a favorable policy environment for migrant workers in cities to live and work; the abolition of the agricultural tax that has been implemented up to 2,600 years in Chinese history; direct subsidies for grain in various forms; the implementation of free compulsory education in rural areas, the rural minimum living security system, the new rural cooperative medical care system and the new rural social pension insurance system, etc.

1.4 Social Protection That Develops from Nothing

In many cases, people’s happiness is not proportional to the degree of affluence. In other words, higher incomes may also lead to lower happiness. Although researchers of related disciplines have not given a satisfactory explanation to date, it is no doubt that the sense of security determined by the social protection mechanisms will have a huge impact on the degree of happiness. The so-called social protection usually refers to a series of policies and institutional arrangements that involve the government and society as the main body to reduce the risk of employment and improve people’s ability to protect their income and living standards by nurturing a highly efficient labor market, thus reducing the incidence of poverty and vulnerability.

Obviously, the social protection-related institutional arrangements should mainly aim at the employment policy and labor market system designed to protect workers’ rights and job security, the social security system that protect residents from unemployment, sickness, disability and old age, as well as the social assistance and welfares for the special difficulties and vulnerable populations, such as children, the elderly, and residents from special areas.

In the planned economy era, many social welfares are provided by the enterprises and units, which is the opposite compared with the current market economy,

i.e., the state makes various production decisions, and the units provide social services in a small range, including the lifetime employment (“iron rice bowl”⁷) taking over the role of the socialization of unemployment insurance, companies undertaking public health and employee subsidies, state-funded corporate pension, as well as the allocation of housing by enterprises, arranging the enrollment of employees’ children, and even offering compulsory education.

Along with the economic reform, the related social services gradually strip from the enterprises especially in order to reduce the social burden and responsibility of the state-owned enterprises and to clarify the operating losses and policy losses, and thus invigorate the state economy. However, to get the enterprises out from social responsibility does not mean that the government should fully take over the relevant social responsibility in way of public services, resulting in inadequate social protection and institutional gap in a certain period. The gap is caused by the interface between both systems, and also the certain stage of related development. Because in this period, local governments focus their resources on economic development, the resources for social development are very limited. Moreover, due to the huge legacy cost left from the planned economy, the government’s financial capacity is rather insufficient.

Prior to the 1994 tax distribution reform, fiscal responsibility and fiscal decentralization reform had strengthened the local government’s financial incentives to mobilize the enthusiasm of local economic development. At the same time, the central government’s capabilities of transferring payments were greatly reduced, thus resulting in a corresponding lack of macroeconomic coordination. Along with the increasing of differences in economic development, there have been strong calls of narrowing the gap between the financial districts and increasing the amount of transferring payments.

Tax distribution reform responses to such a request, and strengthens the capacity of the central government to solve the corresponding problem. For a long time, the central government’s transferring payments has increased the level of equalization of public services, made up for the lack of local government social protection gap, and through the implementation of the regional development strategy, improved the level of balance between regional economic and social development. We can say that during this period, with the economic growth as the main objective of the government, this financial system, in a large sense, provides necessary regional coordination, protects public services and social protection. Its overall effect is positive.

However, both the government’s focusing on economic development, and the continuing to leverage corporate social responsibility, are undoubtedly a rational political economy in line with the characteristics of the development stage. Chinese leaders, at the beginning of the reform, have unswervingly taken economic development as the most widely supported premise of the reform, benefiting the masses by making bigger pies. In addition, maintaining social stability is the key to get public support and to ensure the smooth progress of the reform and development.

⁷A secure job; “iron rice bowl” – a permanent income they would never lose whether they work hard or not, lack of competition. A system popular before the reform since 1978.

Thus, on one hand, during the process of development in the labor market, the government attaches equal importance to deregulation in reform and the reform of labor market regulation; on the other hand, offers social protection for workers by allowing enterprises, especially state-owned enterprises to continue taking social responsibility. Such government responsibilities include: obliging the unions to fulfill the functions of rescuing workers in difficulty; persuading companies encountering operating difficulties not to lay off workers; trying to keep the original workers from the labor market competition, and maintaining institutional wages.

The most typical example in this regard is the responsibility borne by the state-owned enterprises during the late 1990s when suffered with unemployment impact. At that time there have been mass unemployment that had never happened in the planned economy era. As the unemployment insurance system was not perfect then, and the unemployment insurance fund accumulated was not enough for use, the central government called for the establishment of laid-off workers re-employment service centers at enterprises, and proposed that the government, society (the accumulated unemployment insurance then) and enterprises, with the ratio of 1/3, to share the burden of the living allowances for laid-off workers. Although actually the direct costs borne by enterprises did not reach the level of 1/3 (such as in 2002 was 17.2 %), the enterprises still bore the responsibilities of the continuation of social insurance for laid-off workers, providing job training, job information, and helping re-employment.

Meanwhile, in response to the employment impact of the process, the central government has implemented a proactive employment policy, and basically established a social security system covering urban residents as a safety net. Since the twenty-first century, under the concept of equality of public services policy, public services, with social security and social protection as the core contents, quickly extends to the rural areas.

First, the legislation is more focused on the protection of workers. The first “Labor Law” after the reform and opening up was enacted in 1994. Since back at that time, China was still in the stage of unlimited supply of labor, surplus labor transferring from the agricultural sector to non-agricultural employment was urgent for both the employers and employees. Therefore, the law did not perform well, but the expected losses with the law enforcement did not happen to enterprises. This is even seen as a positive experience conducive to the development of flexible labor markets for other developing countries.

With needs to enhance the protection of workers in the new stage of development, in 2008 there were three employment-related laws in implementation: “Labor Contract Law”, “Employment Promotion Law” and “Labor Dispute Mediation and Arbitration Law”. They set up rules and norms for the signing labor contracts, joining the social security, prohibiting discrimination in employment and building harmonious labor relations respectively. Although after the introduction of these laws, China’s real economy suffered the impact of the global financial crisis, and the local governments made appropriate relaxation on the enforcement of some of the laws, they still regulate the employment practices of enterprises and improve the level of institutionalization of the labor market.

Many observers cite the recent labor dispute cases, especially the substantial increase in labor dispute cases concerning migrant workers, to suggest the deterioration of labor relations. In fact, the increase of records and reports of such labor disputes has some kind of endogenousness, that is, compared with the previous times, there are at least several factors that play encouragement to workers' labor lawsuits.

Since the promulgation and publicity of the three labor regulations in 2008, workers feel they have more legal basis. With the changes in the labor supply and demand and the degree of government concern for harmonious society to improve the situation, the cases of labor dispute arbitration and adjudication are significantly biased in favor of the workers' party, giving good results in the labor litigation. In addition, a minor but not insignificant factor is that "Labor Dispute Mediation and Arbitration Law" provides for a "free of charge labor dispute arbitration", which greatly reduces the transaction costs of litigation. These factors are actually evidences of the government's change of policy orientation after the turning point. These changes make ordinary workers, especially migrant workers, to stand up and take labor dispute proceedings.

Secondly, the role of labor market institutions strengthens. Many studies have shown that at different stages of development, the extent and scope of the role of labor market institutions are not the same. With the arrival of the Lewis turning point, wages and other benefits, employment conditions and thus labor relations, are not determined by the spontaneous labor supply and demand of the market, but by the labor market institutions.

A similar change of representativeness is the adjusting trends of the minimum wage frequency and amplitude. In the initial implementation of the system, i.e., in the 1990s, it was characterized by a lower standard with very few adjustments, and was usually not applied to migrant workers. With the widespread shortage of migrant workers since 2004 in China, meaning that labor shortages has become a regular phenomenon, in 2004, the central government asked the local governments to make adjustment at least once every 2 years, and make it widely applicable to migrant workers. Each city government has felt the pressure of labor shortages and competed to raise the minimum wage level.

Overall, since the beginning of the twenty-first century, the cities that have adjusted minimum wage after 2004 increased significantly, and the rate of adjustment also increased. In the face of the global financial crisis in 2009, the minimum wage has not been adjusted in various cities. However, with strong macroeconomic recovery and the return of the labor market activity, compensatory adjustment began around the year 2010, in which almost all cities have raised the minimum wage, with the actual average increase rate of 20.8 %. Since then, the minimum wage has a larger adjustment annually.

Thirdly, the social security system becomes more inclusive. From the late 1990s to the early 2000s, social security and social protection coverage has been greatly improved, including full coverage of urban minimum living security system, the basic old-age insurance system for basic coverage of retired workers, gradually increase of workers on the job, the coverage of urban workers and urban residents

medical insurance system, as well as unemployment insurance and other social insurance system.

Since 2004, the focus of constructing the social security system has been extended to rural areas. The projects that have achieved full coverage, include rural minimum living security system, the new rural cooperative medical care system and the new rural pension insurance system. In order to implement “Labor Contract Law” and “Social Insurance Law” to encourage the migrant workers to participate in social pension insurance initiative, the government implemented policy to make the urban basic pension insurance portable for migrant workers in 2010.

Local governments’ role is more prominent in providing better social security and social protection. Firstly, in recent years the local governments’ spending on basic pension insurance has exceeded the expenditure of the central government. Secondly, in some areas of labor shortage, the government uses the looser requirements of social insurance contribution in financial crisis to consciously reduce the social insurance payment level to include the migrant workers, thus expanding the coverage of the social security. Thirdly, compulsory education of children of migrant workers has been significantly improved. Although the central government has long been stating clear requirements, because the compulsory education expenditure responsibilities lie in local government, it is the local governments’ initiative that solves this problem eventually. Fourthly, the governments’ role in helping migrant workers get owed wages, in arbitration of labor disputes, as well as in equal treatment of migrant workers with urban workers, etc., has greatly enhanced.

Finally, the reform of the household registration system is getting faster. Many researchers have only examined the surface of the household registration status, i.e., the majority of migrant workers who have not yet obtained urban “*hukou*”, while ignoring the household registration system as the institutional barrier that prevents labor mobility and migration, as well as containing unequal social security and social protection. If viewed from the latter angle, we should not draw the conclusion that little progress was made in the reform of the household registration system. As the city governments feel the pressure of labor shortages, thus continuously reducing the requirements of migrant workers settling in this city, we could say that the realizing of urbanization with Chinese characteristics is mainly by local governments promoting the migrant workers to get the urban “*hukou*.”

Most researchers do not see that rural residents’ fast increasing access to urban “*hukou*”. Even in the narrow definition of urbanization, China’s urbanization rate is also unconventional. In 2011, the urbanization rate in accordance with the definition of resident population of more than 6 months was 51.3 %, an annual increase of 3.2 % compared with 1990s 26.4 %, belonging to the world’s fastest rate of urbanization. During the same period, the proportion of non-agricultural “*hukou*” increased from 20.9 to 34.7 %, an average annual increase of 2.5 %. According to transnational comparisons, the international experience is that the average annual urbanization growth rate is 0.7–1.8 % at the urbanization rate of 33 %. These show that, if we take the average annual increase speed of the proportion of non-agricultural household population as the pace of urbanization with Chinese characteristics, in a

certain period of the past decades, the speed is still much faster than the world average.

1.5 Unbalanced Inclusive Development

The real intention of economic development is to make people enjoy better life, more happiness and security, which is largely measured by per capita income, but as people's happiness and security is generally dependent on all kinds of public services provided by governments, the symptomized increase or equilibrium of social development is independent from the overall income level due to weak inclusiveness and unequal distribution.

The unprecedented miracle of China's economic growth achieved in last 30 years is throughout accompanied by the unparalleled increase of the living standard and enhancement of social security. However, as far as economic development benefiting all urban and rural residents at the same step is concerned, this "China Miracle" has not been as unusual as economic growth by far.

The general inclusiveness and sharing of economic development is well manifested by that the labor market development promotes more employment of both urban and rural residents and favorable conditions are created for all residents to share the economic development fruits. Meanwhile, the effectiveness of labor market, the efforts of governmental poverty relief and the construction of social protection mechanism substantially decrease poverty incidences and increase social protection coverage.

However, as the economic development is unbalanced, and the government pays less effort to social development than to economic growth, as a result, regional development gap still exists especially among the East, the Middle and the West China, the income gaps between the urban and the rural and among residents are not materially narrowed down, employment and payment discrimination are common in the labor market, and the household registration system and other institutional obstacles hinder the full coverage of social protection and the equal enjoy of basic public services.

The feelings of common residents should be the final determinant of the development effects of an economic society. The observation of the public concern on social hot issues finds that problems exist in terms of inclusiveness and sharing of economic development. For example, the sociology's surveys in 2006, 2008 and 2011 indicated the public paid high and close attention to price rise, difficult and expensive medical treatment, wide income disparity, wealth polarization and corruption for years.⁸

⁸Research Group of "Comprehensive Survey on Chinese Society", Chinese Academy of Social Sciences (2011).

In fact, both Chinese and overseas scholars and Chinese leaders give recognition social development achievements as performance results of economic development, and also notice the comparative backwardness of social development, many issues and relevant social risks⁹ in that circle. Many studies describe the unbalanced development issues from different aspects.

Here we conclude China development after the reform and opening up as “unbalanced inclusive development”, which helps us find out reasons of issues from the characteristics of China economic development and its phases, and summarize experiences and lessons from this development mode, so as to find out solutions, understand the future trend and explore a more inclusive development mode in future.

The earlier development economists concluded two modes from much experience on the interrelation of economic growth and income distribution in many countries regions. The first mode is “distribution after growth”. In the early stage of economic development, income disparity is allowed to keep widening until the total income reaches some level (such as Kuznets turning point) when the government starts to solve the income disparity. The second mode is “distribution alongwith growth”. Policies and institutions are made to keep low income disparity while the economy is growing.

Generally scholars favor and suggest the second mode. Later scholars and policy makers include social protection into this mode and use income level, income equilibrium, happiness, security and other indices for measurement, and finally develop a so-called inclusive development mode or sharing development mode.

Actually China’s performance in last 30 years on income growth and life quality improvement of all residents and the increase rate of social protection coverage are equated with what those early developed countries did in a century, and meet the criteria of the inclusive development mode. The unsatisfaction is not unusual because the expectation is way above the reality.

People’s expectation on life quality improvement, happiness and security not just comes from its own before-after comparison but also from the comparison between social development progress and economic growth rate. The faster the economy grows, the higher expectation of social advancement, the easier conclusion to arrive that economic development and social development are not synchronous, and the more obvious the social issues will be.

The fast rate of China’s economic growth is quite rare in the world’s economic history. When the economy accelerates, the social development is relatively backward and unbalanced and unfair sharing exists, so people are quite unsatisfied. Thus, some believe the over high expectation of the masses attributes to the plenty of social conflicts and even think the policies to meet the over high expectation are featured of populism. However, if the common people yearning for and expecting beautiful life is adaptive to the economic growth rate and level, it’s reasonable and should be satisfied, and lowering expectation to relieve social conflicts is a dead-end way.

⁹Lindbeck (2008) and Wen JiaBao (2010).

Compared with the economic growth, the social development needs longer and more complicated institutional construction. Thus, when the economic growth is kept beyond a normal speed, the social development is inevitable to fall behind the economic growth. However, it cannot be an excuse to tolerate the backward social development. Especially social development level and the relevant institutional environment are essentially indispensable conditions for sustainable economic growth.

China has already moved into the rank of above-average income countries by per capita GDP. On one hand, from the perspective of economic development phase, disharmony between social development and economic development is more and more obvious; on the other hand, the future economic growth has higher and higher requirements on social cohesion. The sharing degree is the purpose and result of making the cake bigger and also the social condition and the institutional guarantee to keep the cake bigger.

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Chapter 2

Development Is an Unyielding Principle

Most politicians in development countries happen to coincide with the promise that people's lives would be substantially improved, which is what the people expect earnestly. But if the economy has no material growth, the improvement of people's livelihood is just like water without a source, or a meal without rice, finally the promise won't be fulfilled out of nothing. In the last 30 years, the Chinese people's lives have significantly improved; after all, it's the achievement of effective economic development. Deng Xiaoping's "development is an unyielding principle" is best illustrated. Furthermore, development is reinvested with new implications by China's practices, and the Scientific Outlook on Development bears fruitful results.

2.1 "The Scenery Here Is Exceptionally Beautiful"

In early spring in 1992 during the historic South Tour, Deng Xiaoping visited a township enterprise. When he learnt this unknown factory increased 16 times of product volumes in last 7 years, ranked No. 1 in China and exported to Southeastern Asian countries, he delightedly said "our country has to develop, otherwise we'll be bullied. Development is an unyielding principle." The last part is repeatedly quoted and still popular to date. This "unyielding principle" was questioned, but today, 20 years later, no matter Chinese people's feelings of real life or the objective statistics are evidences to reveal and justify this unyielding principle.

Gross Domestic Product (GDP), a metric index of economic growth, is criticized by a wide range of international scholars. Although economists and statisticians make every effort, no substitution more comprehensive than GDP is ever found to date to reflect the economy performance. So, when we observe the economic growth after China's reform and opening up, we use GDP growth rate to make both horizontal and vertical comparison.

Based on the World Bank's GDP annual growth rates of nations and regions from 1980 to 2011, we compare China's economic growth with three typical types of

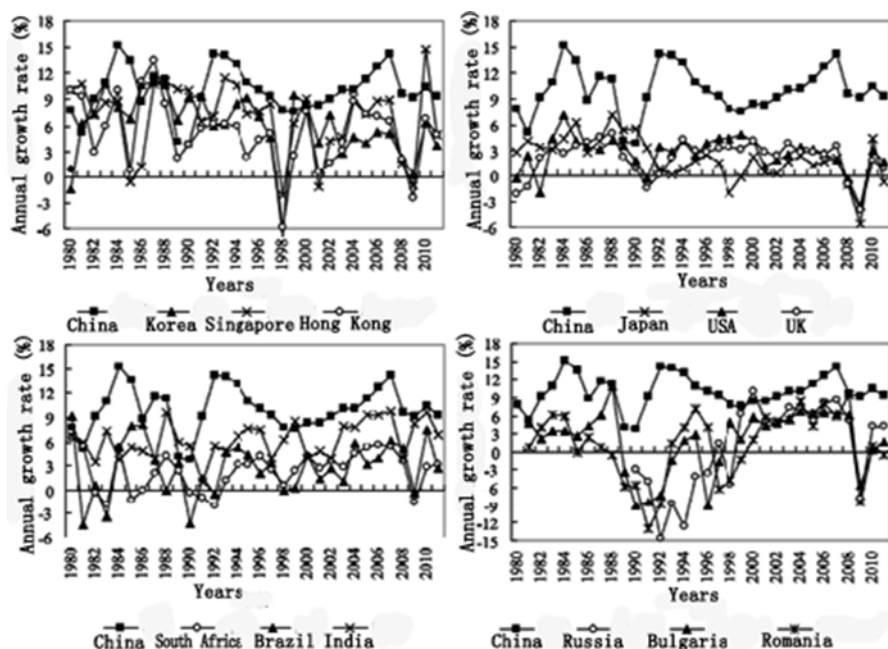


Fig. 2.1 Internationally compared China's economic growth (Source: the World Bank's database, <http://data.worldbank.org.cn/indicator/NY.GDP.MKTP.KD.ZG/countries?display=default>)

nations and regions. As compared, the economic growth of all economies and their stories behind are well observed, as well as China's economic overtaking and outcomes (Fig. 2.1).

There is double significance in comparing China's long-term economic growth and performance after the reform and opening up with its neighbors including Korea, Singapore and Hong Kong, China. One aspect relates to the warning and the demonstration of neighboring economies. In late 1970s and early 1980s when China turned to the important strategy that economic development is taken as the central task, the Party and state leaders including Deng Xiaoping came to consensus that China was far behind in economic development, after inspecting developed countries and neighboring countries and regions, and that it's very urgent to surpass other countries in short time.

In the autumn of 1978 when Deng Xiaoping visited Japan, two incidents reflected his upset to the underdeveloped economy and his determination to improve Chinese people's livelihood. According to Ezra Feivel Vogel, Deng Xiaoping told the host when getting off the car that one of his visiting purposes was to find the "mesona" following the example of Xu Fu, the ancient Chinese who visited Japan in Qin dynasty, namely the magic code to modernization. When he took the shinkansen, he couldn't help saying "fast, so fast!" The comparison with neighboring regions unquestionably inspires Deng Xiaoping to come up with the proposal that "poverty is not socialism".

The other aspect is that the success of neighboring nations and regions whose historical starting points are similar to ours gives us confidence to catch up with and even surpass them, and also provides us beneficial references. In fact, the experience of these countries and regions are important reference points for China to formulate “quadrupling” and “three-step” strategies in early 1980s.

Another unforgettable memory relates to Hong Kong. In the planned economy era, political movements and rigid systems in China Mainland hindered the economic growth and the people’s livelihood improvement. In sharp contrast, Hong Kong, one of famous “Four Asian Tigers”, had substantial improvement on the living standard after its economy took off. This contrast indicates that China Mainland that didn’t get rid of poverty then demonstrated no superiority of “socialism” system in the economic contest with capitalist Hong Kong.

In those years, many residents from Guangdong province crossed the border illegally and “escaped to Hong Kong”. Guangdong province’s incomplete statistics indicate that from 1954 to 1980 the officially documented “escape to Hong Kong” involved totally 565,000 people.¹ Thus, it’s meaningful to compare the development pace of China Mainland after the reform and opening up with that of Hong Kong.

Korea, Singapore and Hong Kong are regarded as a part of “Asian Miracle”, together with Taiwan, later they become “Four Asian Tigers” completing the economic catch-up and once the regions with fastest economic growth in the world. Besides, as Asian countries and regions, these economies have many similarities with China Mainland in aspects of cultural tradition, geographic environment and resources. Therefore, another effect implied in this comparison is to better reflect the economic growth performance of China Mainland afterwards.

According to the World Bank’s statistic caliber, from 1980 to 2011, China’s GDP annual growth rate was 10 %, Korea 6.2 %, Singapore 6.8 %, Hong Kong 4.9 %. The growth of three Asian economies was barely satisfactory in global, but they already moved into the high income stage, their economic growth rates of course didn’t match with China which was still in the process of economic catch-up and surpassing.

Japan, USA and UK represented the most developed countries then in the world and served as the world manufacturing center successively. USA and Japan, especially then, ranked No. 1 and No. 2 respectively in economic aggregate among the countries listed in the World Bank’s statistics. Therefore, the catch-up and surpassing characteristics of Chinese economy would be better observed from the comparison between China’s economic growth performance and the three wealthy countries.

From 1980 to 2011 Japan, USA and UK had 2.1 %, 2.7 % and 2.3 % average annual growth rate respectively. As to these matured economies which were on the neoclassical growth stage, every single step of material growth was dependent on technology advancement and productivity increase, so it’s quite performance to maintain such growth rates in long term. However, Japan’s average annual economic

¹ “Escape to Hong Kong” in Baidu encyclopedia: <http://baike.baidu.com/view/4136265.htm>

growth rate dropped to 0.86 % after 1990 and it was trapped in “two lost decades”. The reasons are explained in other chapters.

In 2003, from the perspective of nation scale and economic growth, Goldman Sachs Group identified BRICs – Brazil, Russia, India and China – that had influential effects on the world economy and gained especial attentions from investors. In 2010 BRICs agreed on South Africa engagement with BRICS collaboration. Now BRICS represents the important emerging economies, but the other four members are much superior to China in economic growth. From 1980 to 2011, average annual growth rates of South Africa, Brazil and India were respectively 2.3 %, 2.6 % and 6.2 %. It's noted that these countries suffered heavy losses in 2008 and 2009 global finance crisis, and were not stable in their recoveries afterwards.

In addition, social tension issues in South Africa, such as labor conflict, backward infrastructure and insufficient labors in India and over-dependence on primary product export in Brazil reflect the tendency to “deindustrialization”. Most analysts and investors are pessimistic about the long-term growth of these economies.

Some countries are globally perceived during the transition from planned economy to market economy, including China and Vietnam in Asia, former Soviet Union and Eastern European countries. Hence, we compare China's growth performance with Russia, Bulgaria and Romania. As the latter three started late in the reforms and adopted radical reform measures, they had rapid drops of economic growth, and their overall economic performance was not as good as expected in last 30 years.

We use L-shaped growth track to describe these transition countries, because their economic transition results in serious recession, their GDPs are negatively grown for years, and their recoveries are not strong enough. From 1980 to 2011 average annual growth rates of Bulgaria and Romania were respectively 1.7 % and 1.0 %; average annual growth rate of Russia from 1990 to 2011 was only 0.4 %.

No matter comparing with itself prior to the reform and opening up, or with all typical economies, the expeditious economic growth China achieved in last 30 years is definitely an unbelievable miracle. Chinese and foreign people inclines to use emotional expressions like “outshining others” or “the scenery here is exceptionally beautiful” to describe China's outstanding economic growth. No one would deny that 1.35 billion Chinese would not enjoy today's life or the world's second largest economy would not break double technological records reaching sky-high and abyss-deep without such extraordinary economic aggregate growth.

2.2 “China Collapse”

Just as China's economic growth miracle attracts the worldwide attention, skeptical attitudes towards this miracle dominated for a while and even come back every time after the prediction that China is declining fails. The economics is usually viewed as “dismal science”. One of the reasons is that the economists act as hoodoos of economic outlook and love to reveal the future that ordinary people are unable to predict or reluctant to face. As participants in the economics, some economists are

willing to tell good news, but some dare to tell bad news. All serve for different purposes.

When Paul Krugman won the Nobel Economic Prize in 2008, some media went wild with the statement that he was the one successfully predicted 1997–1998 Asian finance crisis. This statement is lack of evidences and persuasion, but Krugman is indeed famous for his questions to so-called “Asian Miracle” and his criticisms to East Asian economy model. If analyzing from the philosophical perspective that “things must be corrupted before get grubby”, we believe his insight into inherent defects and potential economic risks of East Asian model. His opinions may not be 100 % correct, but it wouldn’t prevent involved countries and regions from preferring to believe them.

For example, after experiencing skepticisms and criticisms of Krugman and other economists to Singapore’s growth miracle, and a wide dispute among economists about east Asian economic growth model and total factor productivity (TFP), Singapore government doesn’t approve the economists’ criticisms to its growth model, but recognizes TFP importance to economic growth sustainability and formalizes this complicated and twisted productivity index as its national goal measurement, requiring 2 % increase per year. Maybe this is why Singapore’s economic outcomes go beyond those economists’ prediction.

However, some scholars insist on repeating their same predictions even when they are proven wrong again and again, just like the little shepherd who lies “wolf is coming”. It’s totally out of our understanding. No one would respond to these criticisms, because they are not constructive, but just made for criticism.

As to China’s economic prospect, there is always a “China collapse” school, whose most reputable scholar is Gordon Chang. In 2001 when Gordon Chang published his English bestseller “*The Coming Collapse of China*”,² two far-reaching historically influential incidents happened, one good – China was accepted into WTO, the other bad – the World Trade Center in New York was hit by terrorist-hijacking planes. Both incidents are incorporated to be evidences of collapsing Chinese economy by Gordon Chang.

Such as his logic is, China’s economy has rapid growth for a while, but still has potential risks due to its inherent institutional defects like official corruption and low efficiency of state-owned enterprises (SOE). Once China is accepted into WTO, the broader competition becomes inevitable. Insufficient oversea market demands could hardly fuel economic growth when western countries like USA remain in economic downturn after 911. China is impossible to have sustainable growth, hence its coming collapse is within expectation.

None of those astounding predictions in this book has come true in the next 10 years after the book was published. The author’s strong ideological bias and affection make many data sources look quite dubious. Among serious scholars, few agree and applaud. In the following chapters, we will explain how the facts contradict with Gordon Chang’s opinions from every perspective. Interestingly the author who quits an “iron rice bowl” for a free-lance commentary would pay high prices if

²Gordon Chang (2001).

he admitted his misjudged opinions. Gordon Chang keeps speaking his statements aloud again and again, badmouthing Chinese economy and advocating the moribund “China collapse” as a leading thinker.

Any country has to overcome various difficulties at different stages of their economic development. Take demographic transition for example. Chinese demographic transition moves into a new stage that working-age population stops growing after China leverages demographic dividend to achieve 30-year rapid economic growth, so Chinese economy is moving into a new stage with increased labor cost and disappeared demographic dividend. Brand-new challenges promote China to give up factor input oriented mode but turn to technology advancement, productivity improvement and innovation driven mode to stimulate its economy.

To address these challenges, no doubt it's essential and welcome that public scholars reveal issues, warn the public from experience and lectures at home and abroad, and present policy proposals to the policy makers. Gordon Chang keeps his pace with the times. It's of great significance that he discovers China is facing such challenges from its demographic transition trend, but he is neither the only nor the first discoverer. He asserts that China will become a representative of new “rust belt”, displacing Michigan in USA. I'm worried the “wolf is coming” tragedy would return.

My suggestion is that one should at least understand demographic transition theory and demographic dividend experience before he gives opinions about population, especially the relation between population and economic growth. We will discuss this issue in the following section. The term “rust belt” refers to earlier manufacturing centers in the American Northeast decline in the process of industrial restructuring. This phenomenon reflects inevitability and impact of comparative advantage changes. Many general rules and especial phenomena behind are worthy of deep research and cannot be clearly explained in one or two columns. We will provide answers more precise than Gordon Chang's in the following chapters.

2.3 Source of Economic Growth to Date

RAND analysis concludes that demographic dividend is achieved through increased labor supply, extended deposit scale, increased investment in human capital and ROI of human capital. During the dual economic development after the reform and opening up, China's economic growth obviously benefits from demographic dividend. It meets the expectation of economic theory, has Chinese characteristics and is statistically proven. From the following aspects of the source of economic growth, we analyze how the beneficial demographic structure created from demographic transition is cashed into demographic dividend in China's economic growth.

Firstly, stable drop of population dependency ratio makes a favorable population base for capital formation during rapid economic growth and helps national economy keeping a high saving rate. Early in the planned economy, China's saving rate – fixed capital formation to GDP ratio – was very high, kept ascending after the reform, and reached record high in first 10 years of the twenty-first century. From 1995 to 2010, the nominal value of this ratio was increased from 32.9 to 69.3 %, almost doubled. But if GDP and fixed capital formation were corrected according to

the price index, the increase of this ratio would be higher and the absolute value would be much larger, as deflator of GDP is greater than fixed capital price index.

Besides, sufficient labor supply hinders diminishing returns of capital input for sometime. Neoclassic growth theory is based on the law of decreasing return on capital with an assumption of labor shortage. This assumption is undoubtedly essential to western developed economies, but inconsistent with Chinese reality. Therefore, in a long time, infinite labor supply results in high investment ROI in China. High saving rate and high investment ROI are contributions to capital input in the analysis of the source of economic growth.

Secondly, long-lasting increase of working-age population assures sufficient labor supply. With improved education of labors, China has enjoyed low cost advantage in the process of economic globalization. In other words, in a long time, China's competitive strengths not only include sufficient labors and low wages, but also comparatively higher labor quality compared with other developing countries.

For example, in 2005 the average education years of Chinese working-age population is 33 % higher than India. High education improves labor productivity. The analysis of Chinese manufacturing enterprises indicates that one more education year the employees have, 17 % the labor productivity increases. Double advantages – number and quality of labors – endow China the unit labor cost advantage for long.³ The positive effects of these factors on the economic growth are embodied in the contributions of variables including labor input and human capital accumulation in the production function.

Thirdly, the rural falls behind the urban in demographic transition. A plenty of surplus rural labors accumulated in the planned economy are transited during the reform, so resource reallocation efficiency is created where labors flow from low productivity sectors to high productivity sectors. This is the main source of improved TFP during that time. Further decomposition of residual TFP results in the contributed resource reallocation efficiency.

An earlier quantitative analysis indicates that from 1978 to 1998 labors were transferred from agriculture to non-agricultural sector, contributing 21 % economic growth. But the unexplained residual after the decomposition, or the technical advancement factor in TFP contributed only 3 %.⁴

Fourthly, not all demographic dividend contributions created due to demographic transition are covered by the variables mentioned above. If population dependency ratio is statistically taken as the explicit proxy variable of the demographic dividend, its contribution to the economic growth is actually the demographic dividend, or the residual of demographic dividend related factors. In historic economics documents, most quantitative analysis of demographic dividend, no matter in China or other countries and regions, select the population dependency ratio – the comparative ratio of pure consumer population (age 15– and 65+) and productive population (aged 15–64) – as the proxy variable of the demographic dividend.

For example, American economist Williamson takes the population dependency ratio as the variable and estimates that from 1970 to 1995 the demographic dividend contributed 1/4–1/3 Asian economic growth. In addition, he analyzes the economic

³Fang Cai et al. (2009).

⁴Fang Cai and Wang Dewen (1999).

growth and demographic structure data of 17 European and North American countries during 1870–1913, and discovers that lower dependency ratio almost accounts for the superior per capita GDP growth rate of the New World to the Old World.⁵

We try to make further decomposition of the economic growth since early 1980s by the production function, in order to observe all factors’ comparative contributions to the economic growth since the reform and opening up. Among the factors in these theories contributive to the economic growth, we select fixed capital formation, gross employment, education years of employees, population dependency ratio and residual as the variables, respectively representing the contributions of capital input, labor input, labor capital, demographic dividend and TFP to GDP growth rate. We could use another further decomposition to observe how much contribution to TFP comes from the resource reallocation efficiency created by labor transition.

We have two measures to display the analysis results. Firstly, the accurate quantitative analysis results⁶ show among the GDP growth from 1982 to 2009, capital input contributed 71.0 %, labor input 7.5 %, human capital 4.5 %, population dependency ratio 7.4 %, and TFP 9.6 %. The other model estimates that 47.1 % TFP contribution comes from the resource reallocation efficiency created by labor transition.

Secondly, we graph all quantitative analysis data to represent more concise results. Generally Fig. 2.2 clearly shows the respective contributions of all sources of economic growth to China’s economic miracle – the rapid GDP growth – during the reform and opening up.

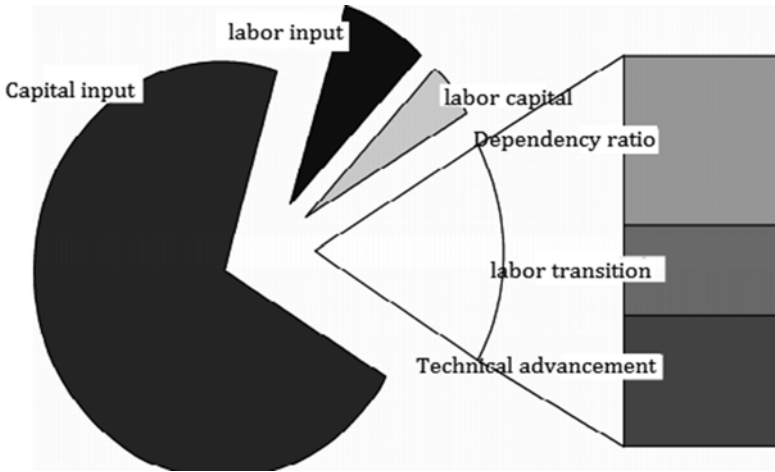


Fig. 2.2 The source of economic growth during the reform and opening up

⁵Williamson (1997).

⁶Fang Cai and Zhao Wen (2012).

2.4 Towards Scientific Development

The skepticism to “development is an unyielding principle” is proven wrong. This point of view is held by the minority but makes some sense. After all, these people observe and express concern that China’s economy has GDP-oriented tendency whose highlighted characteristics include: local governments take the gross economic growth as the core of economic work, even the sole target, and spare no efforts to seek for increasing GDP, as a result, serious problems like unbalanced, inharmonious and unsustainable economy development are too difficult to solve. The problems arising from the economy development are categorized into three aspects:

Firstly, it’s the inharmony between the economy development and the resource and environment. For long, the pressure to maintain rapid growth conflicts with the relatively limited resources and environmental tolerance. Over-dependence on high input production, duplicated industrialization of industrial structure, introduction of high energy consumption and pollution of foreign direct investment (FDI), and vicious cycle of poverty during the production manifest the conflicts mentioned before.

GDP-oriented political achievement philosophy heavily valued by governments at all levels especially the local governments and heavy industrialization resulted from value-added tax (VAT) encouragement contradict with the unsustainable energy supply of China. Many districts, especially those have depended on labor-intensive industries to achieve rapid growth since the reform and opening up, recognize that they have moved into the heavy industrialization stage and start to encourage the prioritized development of heavy industries or intentionally raise the heavy industry ratio by implementing industrial policies and regional development strategies. Heavy industrialization is impelled by local governments’ GDP-oriented political achievement philosophy and the VAT system that high heavy industry ratio will increase the taxes. In recent years, mechanical, automotive, steel and other heavy industries are the major impetus for GDP growth.

This is a misunderstanding of industrial restructuring. Actually the essentials of industrial restructuring are to move the economic growth from the over-dependence on factors input to the dependence on productivity improvement and innovation. In a very long time, China is still in the developing stage with abundant labors, relatively scarce capitals and absolute scarce resources. On one hand, developing heavy industries during this stage go against with the theory of comparative advantage, which costs a high price; on the other hand, this heavy industrialization is unsustainable. When China has absolute scarce resources, the international politics of resources restricts our development. The economic growth depending on heavy industrialization will consume a great deal of energy and raw materials.

Secondly, the unsustainability of economic growth is enhanced due to local governments’ hunger for FDI and encouragement for and even compliance with the transfer of high energy consumption and pollution industries from developed countries to China. China’s rapid growth and potentials attract FDI import. No doubt FDI

output countries value the rich and cheap labors, the huge market and its potentials, but they also intend to transfer high pollution and energy consumption industries into China. This intention and tendency is increasingly intensive under the conditions of tight world's energy supply and boosted emission reduction pressure.

What's the worse is the neglect of environment price occurs during the transfer of labor-intensive industries from the coastal regions where the labor cost has increased to the Midwest regions. If we indiscriminatively attract investments, the high pollution and energy consumption industries would swarm into China's Midwest regions as never before, and their industrial structure would therefore be far from sustainable.

Thirdly, some people concerning about the inclusion of economic development have some questions to "development is an unyielding principle". People are too desperate for adequate food and clothing and income increase to consider environmental pollution before introducing investments or injuries and damages during the work, so pollution incidents, injuries and major accidents happen frequently. The dangers of pollution are underestimated on one hand, and the safety is neglected and the lives are despised when pursuing for production expansion on the other hand. As the society advances and internet media develops, environmental pollution incidents, employment injuries and mine disasters are reported without delay, attracting wide attention and receiving wider supervision from the whole society.

In addition, the social development is far behind the economic growth. Governments are not as powerful in providing public services to construct social protection mechanism as in promoting the economic growth, resulting in great disparities in the actual social protection level and demand. For long the gaps of all types of incomes have expanded, and the development achievements have not been evenly shared by all people.

To address the phenomenon existing in the social economic development, the Communist Party of China (CPC) proposes a brand-new philosophy – the Outlook on Scientific Development. The 18th CPC National Congress concluded that "in contemporary China, the essence of adherence to 'development is unyielding principle' is to adhere to the Outlook on Scientific Development." The essence can be understood from the following aspects.

First of all, the great rejuvenation dream of Chinese nation is certainly supported by the improvement of economic development and national power. In 2012 per capita GDP was \$6,000, ranked in the above average countries according to the World Bank's criteria. But it still needs more efforts to move into the rank of high income countries. Economic development histories of many countries tell us that this is a critical phase where countries are easy to fall into the medium income trap. The grand mission to rejuvenate Chinese nation requires that China has to maintain a moderate economic growth speed and successfully step over the medium income phase.

In a conference in 2010, I spoke about how to step over the medium income phase, and cultural scholar Gan Yang immediately fought against me. He believed it's impossible to become a so-called high income country as China is so big a country. What's more, the world's resources are not enough to support China to develop

into a high income country. We shouldn't pursue for high income otherwise it's more like to drain the pond to get all the fish. Finally he suggested that we should focus on how to realize fair allocation among the society and how people would live a fairly good life after China reached the medium income level.⁷

This conclusion is good but too naive. The experience of countries falling into the medium income trap tells us that it's impossible to improve the income allocation under the condition of sluggish economic growth, and the people are unable to "live a fairly good life" in such a society. The social equity of course is what we pursue for, but the premise of fair distribution of the "pie" of social wealth is to have a "pie" and make it bigger. If there is no circulating social wealth, any commitments to improve people's living standard and income allocation are just lip services, impossible to meet.

It's said the Kingdom of Bhutan locating in the south slope of Eastern Himalayas ranks top in a list of sense of happiness. This seems to be a typical case that demonstrates people's sense of happiness is totally irrelevant to per capita income. But a further observation indicates this globally No. 125 country has only \$2,000 per capita GDP, and still suffers from inadequate food and clothing or poverty, not to mention meeting material and cultural demands. So it's at most a country contented with poverty and devoted to things spiritual, far from the objective assessment of happiness.

Besides, the essence of the resource and environment issue is not whether to develop or not, but which way to depend on for the economic development. Depending on "zero growth" of "the Club of Rome" to solve the resource and environment puzzle is more like giving up eating for fear of choking. A typical example attracting worldwide attention is the destruction of Amazon Rainforest. With richest biodiversity and materially influence on the global weather, this area happens to cross eight Latin American countries including Brazil. These countries are lingering in the medium income phase for long, their wide poverties impose great pressure on resources and environment, and their economic growth deviates from the sustainability, so they are unable to protect this biological treasure, but intensify excessive deforestation, leaving this ecological place called "lungs of the earth" into dangers.

Second of all, the purpose of economic development is to meet people's increasing demands on materials and culture. The development should be inclusive, sharing, comprehensive and harmonious. The earlier development theories prioritize efficiency improvement and production expansion with the ultimate goal of increasing the economic aggregate and per capita welfare. However, the economic growth doesn't inevitably lead to the development outcomes equally shared by all people, but brings up various economic and social issues.

Chinese and foreign scholars establish different development theories after observing the issues brought by economic growth itself from perspectives of different subject schools. The contents of development outlooks range from the philosophy of human society evolvement to the pains individuals suffer during the

⁷Yu Yongding (2011).

evolvment. As the development outcomes contradict with the original intensions, people come up with essential issues like how to define and plan the development. Meanwhile, the metrics for development outcomes are questioned, and new measures are tried.

Malthus is the first one to rethink about the development from restrictions of population growth. In his view, the true cause of poverty is “the Law of Nature”, where the population is geometrically increased and the supply of living materials is hard to catch up with the population growth. Eventually the sustainable increase of population makes people falling into the poverty trap. The “Limit of Growth”, a report from the Club of Rome in 1972, extends Malthusians “population-food” crisis into a “population-resource-environment” crisis.

Some economists use the economic analysis to criticize new Malthusianism and make clear statement that in developed countries the population growth has positive significance on the economic growth through knowledge advancement and economies of scale. They discuss the diversity of the earth’s resources from many aspects and indicate that only if politics, institution, management and market mechanism are well played, the population growth would be favorable for economic development and technical advancement in the long run.⁸

The sustainable development thoughts seek for a new development path, which is illustrated in *Our Common Future* published by the World Commission on Environment and Development (WCED) in 1987. The new development path emphasizes people first and coordinates population, resources and environment from intergenerational relations, so that “mankind advancement lasts not only a few years in a few regions, but for the remote future for the whole earth”. The sustainable development is defined as the “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”⁹

French economist Francois Perroux distinguishes “growth” from “development”. He believes that development contains more than per capita GDP increase. He emphasizes the structural reform and evolvment where “all types of human resources have potential to gain efficiency and capabilities”.¹⁰

Todaro concludes three core connotations of development: basic living needs, self-esteem and freedom and proposes the goals of development should include: the increase of basic necessities of life, the improvement of human dignity and cultural values by more employment and education opportunities, and the increase of economic and social choices for both individuals and nations.¹¹ Stiglitz says development means a series of economic and social changes, but these changes themselves are just measures to fulfill goals, and the intention is to make individuals and the society have better control of their own destinies.¹² Amarty Sen indicates that

⁸ Simon (1984).

⁹ *World Commission on Environment and Development, Our Common Future*, New York, Oxford University Press, 1987.

¹⁰ Perroux (1987).

¹¹ Todaro (1999).

¹² Stiglitz (2000).

development is a process for people to enjoy freedom, and the ultimate purpose is to seek welfare for people.¹³

Different definitions of development lead to different views on the relation between growth and distribution during the development process, and further the relation of equality and efficiency. The core of income allocation is measurement and assessment of developed welfare. Kuznets finds in the earlier phase of economic growth, the increased income deteriorates the income allocation, but when the income is increased more, the income allocation gets improved. This is the famous Kuznets curve, with an inverted “U” shape.¹⁴ The so-called laws implied in this curve are proven to be not 100 % correct by the development experience of some countries and regions. Besides, this relation, as a development concept, is already abandoned by most scholars and policy makers.

In the earlier planned economy, Mao Zedong attempted to well manage the coordinated but contradictory dialectical relation between fairness and efficiency. But in later economic system and years of construction practices, there are no effective incentive mechanisms, so production enthusiasm of individuals, community and enterprises is inhibited. The bad management of this relation hinders the development of productivity.

The key of balancing fairness and efficiency is how to utilize policies and incentive mechanism to manage the relation between getting rich first and common prosperity. When Deng Xiaoping advocates “some people get rich first”, he emphasizes allowing some regions, enterprises, workers and farmers to gain more incomes by their hardworking; he also points out the purpose of letting some people get rich first is to set an example and drive other regions, enterprises and people to work hard, and eventually achieve common prosperity among all nationalities.¹⁵ Some people getting rich first is the inevitable outcome of efficiency when incentive mechanisms come into full play, and would happen in any systems. Therefore, Deng Xiaoping’s wave-like theory of common prosperity conforms to the law of social development.

The Outlook on Scientific Development aims at promoting the coordination of economic development, resource and environment, and social development, achieving people-oriented inclusive development and constructing a socialist harmonious society. It theoretically complies with Marxism materialistic view that thought and existence have identical features and the dialectical view that contradictory unifies but opposites. It also practically comes up with a series of important strategic subjects facing to the reform and development. To achieve scientific development, the only path is to accelerate the transformation of the mode of economic development.

¹³ Sen (2002).

¹⁴ Kuznets (1955).

¹⁵ *The Selected Works of Deng Xiaoping*, Vol. 2, People’s Publishing House, 1983, p. 152.

2.5 Transforming Economic Development Model

Imbalance, inharmony and unsustainability always exist in China's economic development. The question is not whether we need GDP, but what kind of methods we use to promote economic development. To address this core issue, the history rapid growth has successful experience and useful lectures deserving second thoughts.

Chinese and foreign economists have various interpretations about "China miracle" created in last 30 years after the reform and opening up. Economists correlate China's economic reform and development outcomes with the discussion on the reform target pattern such as Washington Consensus and Beijing Experience; with the discussion on the reform mode such as progressive reform and radical reform; with the discussion on the relation of government and market such as authority institution and neutral government.

Interestingly, economists usually come to tit-for-tat or opposite conclusions from the same Chinese experience. While Chinese experience demonstrates "Washington Consensus" no longer effective, some economists still believe the success of China's reform lies in the appropriate application of standard economic theory (in other words, the compliance with "Washington Consensus").¹⁶ But actually in this recognition, the concept of "prescription" of treatment is confused with the concept of "therapy outcome". Speaking of China's reform, there are no evidences of doctrinal principles that we follow from the very beginning, but what we achieve surprises the world.

The reason for ambiguous concepts and contradictory observation results is that, compared with other countries, China's reform concepts and practices have the features including determined goals of China's reform, but undetermined, diversified and ever-changing means to achieve the goals. If CPC tenet is not well recognized that serving the people heart and soul, "Three Representatives" and the outlook on "People First" scientific development provide fundamental guidance to the reform, opening up and development with Chinese characteristics, it would be impossible to truly understand "China Miracle".

When assessing the outcomes of China's reform, opening up and development, western economists get used to start from some doctrine and compare China with a fixed and priori reference frame,¹⁷ but later discover this reference frame is not what China takes the initiative to comply with and pursuit for during the reform. Actually it manifests the philosophical differences on the reform between China and other countries. In other words, the purpose of China's reform is not to transcendently fulfill some preset goal patterns, but to improve people's living standard and national

¹⁶Yao Yang (2008).

¹⁷For example, an American published work on China's reform quotes Deng Xiaoping's famous saying "crossing a river by feeling the way over the stones" as "how far across the river?" Hope et al. (2003).

power ultimately. Reform steps and paths are selected and definite goal patterns are gradually settled according to its ultimate purpose.

Starting from this ultimate purpose, we have gradually explored a path suitable for China's national conditions to realize the transformation from the planned economy to the market economy; however, there are no constant or standalone patterns to realize the market economic system which actually serves the improvement of people's livelihood and national power. Just because of this reform philosophy and direct starting point, the guidance principles and the advancement means of China's reform are not restricted within any transcendental doctrines.

The reform is to improve productivity, most people's livelihood and national power. This principle is throughout definite and should be unswervingly insisted on. Under the guidance of this reform philosophy, reform, development and stability would be integrated into a whole. Reform is for the purpose of development, but subject to stability, while development outcomes are evidences to verify the reform path, and stability creates favorable conditions for deepened reform.

The central government's request for the acceleration of economic development mode transformation reflects the party's tenet in the economic development thought. At the beginning of the reform and opening up, China has only \$150 per capita GDP and is a typical low-income country. Once the reform stimulates the enthusiasm of labors and business operators, the first priority is to accelerate the economic development, change poverty and backwardness and significantly improve people's living standard. As Deng Xiaoping repeated, neither poverty nor slow development was socialism. In fact, the acceleration of economic development, and the improvement of GDP, per capita GDP and people's living standard are touchstones to verify the correctness and the success of the reform and opening up policy. Therefore, within a certain period of time, the development speed is most critical, so "fast" takes the first priority over "good".

In last 30 years since 1978, China has achieved nearly 10 % average annual GDP growth rate and over 8.6 % per capital GDP growth rate. When Chinese economy moves into a new phase, especially twenty-first century, China has been listed into lower middle income countries and then above-average income countries; its productive factors have been tremendously changed. Meanwhile, more "unbalanced, inharmonious and unsustainable" issues in economic development have emerged than ever before. It becomes more urgent to transform economic development and achieve coordination of economic development and social development. So after a long period of time when rapid economic growth is achieved under the compromise of resources, environment and balance, "better" development is becoming the first choice.

Economists and policy-makers have made wide discussions on economic growth modes for long, and come to consensus that economic growth should be transformed from extensive pattern to intensive pattern. When making the "9th Five-Year Plan", the Party Central Committee and the State Council officially proposed the requests for fundamental transformation of economic growth mode. As many issues arising from economic growth were correlated to growth modes, after long-term discussions within the economic circle, the "11th Five-Year Plan" emphasized

“accelerating promoting the economic restructuring and transforming economic growth mode” and its critical significance to Chinese economic development.

The “11th Five-Year Plan” said “the crucial reason of many issues arising from China’s current economic development lies in unreasonable economic structure and extensive growth mode”. So China set forth a series of targets especially obligatory targets that transforming the extensive and expansive growth mode featuring of “high input, high energy consumption, high emission and low efficiency” into the resource-effective growth mode featuring of “low input, low energy consumption, low emission and high efficiency”.

The 17th National Congress of CPC defined the transformation of the mode of economic development as to “propel three transitions in the mode of economic growth: the transition from relying mainly on investment and export to relying on a well coordinated combination of consumption, investment and export; the transition from secondary industry serving as the major driving force to primary, secondary and tertiary industries jointly driving economic growth; and the transition from relying heavily on increased consumption of material resources to relying mainly on advance in science and technology, improvement in the quality of the workforce and innovation in management.”

Starting from the fundamental requirements on the Scientific Outlook on Development, the three transitions of the mode of economic development are more scientific, clear and definite no matter connotatively or denotatively. This expression points out the sustainable source for future economic growth and emphasizes the demand factors for more balanced economic growth, moreover, niche-targets the direction of industrial restructuring. In addition, the previous so-called “economic growth mode” has been changed into the current “economic development mode”, which itself reflects the more comprehensive and balanced development requirements putting people first.

However, the transformation of the mode of Chinese economic development to date is not as good as expected. To some extent, the mode of economic development that over-dependence on material capital and labor force input is even intensified. The unreachd quantitative indices proposed in the 11th Five-Year Plan, such as R&D output to GDP ratio, service industry employment ratio and its production value ratio, and some most difficult ones like energy-saving and emission reduction, are directly correlated to the transformation of the mode of economic development.

Reviewing the growth theories and the international experience, we know that the main sources of economic growth are different in different phases, and the suitable development mode is inevitable to exist within a certain period of time. Only when a growth source is fading and dying, it’s urgent to transform the development mode, in order to find out new growth sources. The sustainable development overcoming the growth restriction factors is formulated due to the growth requirements on the basis of the transformation of the mode of economic development. When Chinese economy has moved into such a phase, the huge growth impetus caused by the institutional reform and opening up has motivated the existing growth sources to its most extent and even exhausted their potentials. If the economic growth is not

transformed from relying mainly on input expansion to relying mainly on productivity improvement, the potentials of economic growth would decline until drain out.

Considering the new periodic features of economic social development and the restrictions of international political and economic environment, during the period of the 12th Five-Year Plan, the biggest challenge facing to China is how to avoid falling into “medium income trap”. According to the World Bank’s benchmark in 2010, countries with less than \$1,005 per capita GDP were low income countries, \$1,006–\$3,975 per capita GDP were lower middle income countries, \$3,976–\$12,275 per capita GDP were above-average income countries, and more than \$12,276 per capita GDP were high income countries.

In 2010 China’s per capita GDP, calculated according to the official exchange rate, was above \$4,000, ranking into the above-average income countries. In fact, China’s per capita GDP was over \$6,000 in 2012. The international experience tells us, once a country enters into the medium income phase, all policies and development strategies effective in stepping over the low income trap are no longer useful; new development strategies and new means to step over the medium income trap are needed. Hence, the medium income phase is a special development phase. The positioning of this new development phase brings up unprecedented opportunities and challenges. Whether the transformation of the mode of economic development is attained is a matter of life and death.

The institutional reform and the policy regulation are prerequisites of the transformation of the mode of economic development. For example, the transition from economic growth supply factor to productivity increase needs to clear all institutional obstacles that hinder free flow of productive factors between the urban and the rural, between sectors, and between production units; the transition from economic growth demand factors to more balanced combination of export, investment and consumption relies on the reforms on investment and financing system and income allocation system. Therefore, the 18th CPC National Congress says deepening the reform is the key to accelerate the transformation of the mode of economic development. And, the reforms on relevant sectors won’t be smooth; more political courage and wisdom are needed.

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Chapter 3

Reform Is the Fundamental Driving Force

As China's economy has created the miracle of development, increasing 1.35 billion Chinese people's average income level to be 16 times higher than that of more than 30 years ago, China's reform and opening up has also attracted worldwide attention. In fact, the achievements of economic growth and higher living standards are strong proofs of this policy's success. However, as for China's goal of establishing the perfect system of socialist market economy, the task of reform has not been completed yet. Also, as a process of institutional evolution and policy adjustment complying with the demand for institutions reform is also never-ending. Therefore, in order to cope with all sorts of challenges on future journey of deepening reform, it is necessary to review the reform logics to date and summarize experiences and lessons in the process, thus to reveal the unfinished reform tasks.

3.1 Logics of Reform

Theoretical economists tend to split themselves into two camps in explaining the performance of nation's economic growth. Economists in the first camp start from the premise that system is given. They emphasize the accumulation of single factor of production, or the improvement of productivity. This camp includes the physiocrats (emphasizing on the unique role of land), early growth theory (emphasizing on the key role of capital accumulation), development economics (considering the role of labor on precondition of capital accumulation), demographic dividend school (highlighting the role of population structure) and neoclassical growth theory (taking total factor productivity as the only sustainable source of economic growth).

Economists in the other camp put all their attentions to institutions' effects on economic growth. Their theoretical explanations are multifarious, including attributing the success of economic growth on protestant spirit of abstinence and saving, clearly defined property rights, mechanisms restraining interest groups' activities

and perfect market mechanism or governments' active and proper roles, and so on, to name just a few.

Obviously, it is not accurate to simply classify these multifarious economic theories into two camps, however, when empirical economists are trying to integrate the accumulation of various factors of production, improvement of productivity, system arrangement, government functions and other variables into econometric models, theoretical economists have indeed failed to form consistency and continuity in logics, thus they are unable to put forward theoretical models which can give unified explanations on the effect factors of production, productivity and economic institution have on economic growth. Mainstream economics' this tendency makes itself incompetent and deficient in guiding developing and transition countries' practices, or in explaining success and failure of their economic growth performances.

If we only take the accumulation of necessary factors of production into account regardless of institutional factors, we can say that China had already possessed many conditions for high-speed growth before reform and opening up. We can make some observations on the accumulation of labor, capital and human capital-variables which are often selected by econometric models of economic growth.

First, before the 1980s, China had entered the demographic transition process from the second phase (high birth rate, low mortality rate and high population growth) to the third phase (low birth rate, low mortality rate and low population growth). Starting from the late 1960s and lasting through the 1970s, the total fertility rate had dropped rapidly. Accordingly, working-age population from 15 to 59 years old grew faster than the whole population, while the proportion of working-age population began to rise and population feed rates began to drop.

Second, relative to the level of per capita income, China had already possessed good human capital accumulations before reform and opening up. For example, according to no matter what kind of data source, China's GNI per capita or GDP per capita in 1980s ranked the last four among more than 100 countries with statistics worldwide. However, as one of the human capital indexes, China's average years of education of above than 25 years old ranked 62 among 107 countries with data, while another indicator of human capital – life expectancy at birth ranked 56 among 127 countries with data.

Finally, although low level of per capita income represents lower capital endowment, China still realized quite a high capital accumulation as a result of its strong ability of resource mobilization in the period of planned economy. Relative to the level of per capita income, China had already formed an industrial system with quite complete categories yet excessively high proportion of heavy industry before the starting of reform and opening up. This pattern of industrialization was no doubt inefficient, and the industrial structure formed by it deviated from comparative advantage, which however profited from high accumulation rate. During the period from 1953 to 1978, China's average accumulation rate reached 29.5 %, higher than the world average.¹

¹ Justin Yifu Lin et al. (2003).

However, as a result of several major policy blunders and commonly existed institutional drawbacks, favorable trend of demographic change, which had already appeared before reform and opening up, did not turn into demographic dividend, which was shown during the period of reform and opening up. Accumulation of human capital and material capital did not turn into substantial economic growth in the period of planned economy, thus people's living standard had not been improved for a long time.

For economists who have recognized economic systems' influences on the performances of economic growth, they are often eager to create a criterion which should be followed to realize economic growth and name it "Consensus". Therefore, when invited, they are eager to recommend transition countries a packaged reform, known as shock therapy. However, China did not accept "Washington Consensus", which was once quite popular, not to mention shock therapy, yet it has so far achieved better reform results than countries following the criterion of free market economy.

Many foreign observers and researchers have noted that China's gradual economic reform took several steps, which started without an overall blueprint, in the way of solving urgent problems at that time and taking the pursuit of direct effect as the starting point. For example, Coase and Wang Ning think that "The series of events which led China into modern market economy were not purposeful plans" was completely surprising, thus they think that China's this economic transformation is an excellent case for Hayek's theory of "unintended consequences of human behavior".²

Can China's reform and its success only be explained by "unintended consequences of human behavior"? In other words, is China's reform a purely spontaneous process, or a conscious institutional change, or a cooperative game between direct participants in economic activities and senior policymakers under consensus? In fact, behind the reform path with Chinese characteristics, there exists Communist Party of China's strong desire to improve Chinese people's living standard and exploring practices Chinese people have made for that. If we realize this fundamental starting point of reform and its characteristics of practice, it is not hard to understand and map out the inherent logics of China's more than 30 years reform.

It is well known and can be empirically tested that a series of major policy changes have influenced the direction and promoted paces of this reform. An important milestone is the Third Plenary Session of the Thirteenth Conference of the CPC convened in the winter of 1978, which established the basic route of taking economic construction as the center and China's reform and opening up, and launched this largest reform with most far-reaching influence in human history. Another important milestone is Deng Xiaoping's South Tour Speeches at the beginning of 1992 and the CPC's 14th Conference at end of the same year, which established the target mode of building up the system of socialist market economy, leading the reform further deep.

²Coase and Wang Ning (2013).

In 1978, when the CPC launched “Theoretically Put Things Right” and reestablished the ideological line of “seeking truth from facts”, it faced the harsh reality of 250 million peasants with insufficient food and clothes. While people had not reached the recognition level of completely negating the people’s commune system, however, system forms that could help the rural population getting out of poverty effectively- production contracted to household and work contracted to households were recognized, thus opened the curtain of China’s reform. After that, system explorations which were propitious for improving the enthusiasm of laborers and micro-production organizations could be recognized and implemented, while system obstacles which impeded productivity development were constantly eliminated.

Clear target mode and thought were not formed among the leaders at the beginning of the reform, and the reform’s guiding ideology to establish socialist market economic system was not formed until the early 1990s. However, following the evaluation criterion of “propitious for developing socialist productivity, for strengthening comprehensive national strength of socialist countries and for improving people’s standard of living”, the reform could be said to have irreversible promoting logics from the beginning.

Economic system is a structure with inherent logical consistency, within which government intention, allocation ways of resource, price formation mechanism, form and structure of ownership system and micro incentive mechanism coordinates and unifies to achieve operations of producing activities and economics. Reform is transformation of existing economic system, involving all aspects of system structure. Also, there necessarily exist internal logics between each local reform. Before analyzing China’s reform logics, it is necessary to review traditional economic system’s formation logics before the reform.

After the foundation of the People’s Republic of China, Chinese leaders’ strong economic catching-up and transcending desire was embodied in speeding up industrialization, especially in the selection of strategic target for heavy industrialization. Whether they consciously recognized it or not, the following logics were self-evident, namely in an agricultural society with low income levels, necessary capital accumulation to realize industrialization could not be conducted by the lead of market signals. Therefore, planning system pressed down production and producing factors’ prices artificially and allocated resources relying on administrative authority and administrative means, while ownership form took direct control of economic surplus’s re-allocation through nationalization of economic activity unit (and people’s commune movement of agriculture). They were both natural results of system arrangements.³

Transnational economic research and China’s experience in the period of planned economy both proved that under such mode of economic system, exclusion of market mechanism led to macro-inefficiency of resource allocation, lack of incentive mechanism resulted in micro-inefficiency of economic activities, absence of rewards and punishment system harmed workers, farmers and managers’ work enthusiasm.

³Justin Yifu Lin et al. (2003).

The Factors of production's growth realized through government's powerful resource mobilization were offset for a large part by total factor productivity's negative growth, failing to turn into good economic growth performance. In particular, mismatch of resources resulted in deformity of industrial structure, thus people's living standard could not be improved along with economic development.

Any institutional change will inevitably encounter difficulties, which is the paradox between reform that must be carried out as well as vested interests it may blow and current ideology. China's reform since the late 1970s did not touch vested interests, nor gave up immediately the understanding that planned economy was socialist economy's characteristics, yet it started from using the principle of material benefits to motivate the workers and increase enterprise incentives. With the change of price formation mechanism and the increase of enterprise competitions, the reform started to hit the resource allocation system, and the planned economy system had been gradually given up through reform ways such as double track prices system.

Top-down reform promoted by the way of Pareto improvement completed the incentive mechanism for microeconomic unit and the reconstruction of governance mode, and preliminarily built up the market-allocates-resources system, boosting the vigor of market economy. However, with the reform's Pareto improvement opportunities reduced, it was more and more difficult to avoid touching the vested interests, and top-level design requirements for further reforms were put forward. However, in the process of promoting high-speed growth in reform and opening-up period, government had played a positive and important role, while at the same time, government behavior's direct intervention on economic activities not only became the object of reform itself, but also became a part of vested interests which impeded this reform. Therefore, deepening of the reform must set out again on a new starting point.

3.2 Incentive Mechanism and Governance Mode

It is generally believed that when 10 years "cultural revolution" from 1966 to 1976 ended, China's national economy had already reached the verge of collapse. The most urgent and realistic problem to transfer the party and the nation's working focus on economic construction was undoubtedly the absolute poverty of rural areas and the stagnation of urban workers' wage growth, along with people's living standard not improving for a long time. Lack of the principle of material interests suppressed working enthusiasm, thus hindered the development of economy and improvement of productivity. Therefore, an important step to restore people's confidence in the superiority of socialist system and build consensus on reform was to re-admit the principle of material interests.

Since there is lack of direct connection between single laboring stage and final results in the process of agricultural production and agricultural labor's hard-to-supervise characteristics, reform on agricultural economic system took the

direction of combing arousing workers' enthusiasm with land use rights and land management rights, reflecting in the implementation of household contract responsibility system and the abolition of people's communes. Under the household contract responsibility system, lands owned by villagers collectively were equally distributed to families to farm. Crop yields were paid for agricultural tax and amount retained by the collective, and some agricultural products were sold to the state according to some rules, after that, family could own and control the remaining themselves.

Household contract responsibility system greatly improved rural workers' productivity enthusiasm. According to Justin Yifu Lin's research, during the period from 1978 to 1984, as a kind of institutional change, the implementation of household contract responsibility system had a one-time increasing production effect on the total agricultural total output, with its growth contribution up to 46.9 %.⁴ At the same time, farmers got allocation rights of labor resources and long-term accumulation of agricultural labor force's surplus was also liberated, which successively transferred from crops planting to generalized planting industry, business diversification of forestry, animal husbandry, subsidiary business and fishery, township enterprises, until finally to non-agricultural industries of cities and towns at all levels.

Since then, with people's communes' (and thus production teams') dissolution, decline of collective unified management, abolition of state monopoly for purchase and supply, and later cancellation of agricultural tax, collectively-owned lands were in fact permanently contracted to peasant families, who actually enjoyed management rights and earning rights, and even part of disposition rights. Family-run became agricultural industry's basic management system by law. In terms of agriculture, micro-incentive problems were once for all solved.

In cities, reform of state-owned enterprises initially took the form of the state's decentralization of power and transfer of profits to enterprises. Around 1978, enterprises and public institutions gradually restored the bonus system which was cancelled during "cultural revolution". In fact, the main purpose and effect of bonuses were not only rewards and punishments according to workers' performances, but also as a means of increasing workers' income. At that time, bonuses of regular production reward were generally paid from wage-funds, equivalent to 16–25 % of standard wage.

Relating wage and reward to the performance of enterprise management synchronized with allowing enterprises to retain some of the additional revenue's autonomous disposition rights, namely retained profits. In addition to the rights to pay salaries and bonuses, enterprises had successively gained the rights of selling and pricing product, options for production factors, the rights to use their own capital, the rights of joint management, options for technological progress directions, and other rights. Also, they were allowed business diversification. These incentive measures created incentive mechanisms for enterprise production and management, and at the same time, they also inspired government departments and local governments' immediate attentions on enterprises' management performances.

⁴Justin Yifu Lin (1992).

In order to further straighten the relations between enterprises and the state, and make enterprises the main management bodies on the market, two reforms also took place in the 1980s, which were “Tax for Profits” and “Loaning Instead of Allocating”. The reform of “Tax for Profits” was to draw a clear line between government financial income and enterprises’ disposable income, and form the mechanism that linked national finance income with tax and enterprise income with profits. The reform of “Loaning Instead of Allocating” was to improve use efficiency of fiscal fund, and change investment in capital construction in national budget from allocations to loans. Although the legal relations formed by “Loaning Instead of Allocating” did not belong to loan relationships, but was the use relationship of fiscal fund, yet the reform laid an important foundation for finally building up enterprises’ as the main player of the market.

State’s decentralization of power and transfer of profits to enterprises gave birth to a reform form with Chinese characteristics- contract system, which was described as “once contracted, efficiency improves”. In early 1980, Shandong province took the lead to change retained profit to contracted profit, namely dividing enterprises’ profits between the state and enterprises according to a quota or a proportion and forming a responsibility system of industrial economy, which gained national recognition and were widely promoted across the whole country. Since then, circling around enterprise management mechanism, various forms of responsibility systems were created and various reform tests were conducted. These forms include large and medium-sized enterprises’ contract system, as well as small and medium-sized enterprises’ pilot projects of rental system and joint-stock system.

The core of enterprise contract system is that enterprises gain autonomous management right delegated by the state and residual claim right through their obligations of committing to pay profits (tax) to the state, conduct technological transformation, earn economic benefits, increase their assets’ values, and their management responsibility of self-sustaining. Different enterprises had different motives, and the forms of enterprise contract system were multifarious, however, generally this was a beneficial try of state taking indirect regulations and control in the condition that direction of market-oriented reform had not been determined and people’s understanding of state-owned enterprises was still limited. This system focused on making enterprises to manage independently and sustain themselves through pushing them to the market, and it was an important step of the reform.

It was worth pointing out that in the period of reforming state-owned enterprises through contract system, the government proved the reform principle of separating enterprises’ ownership right with management right, and formulated the Law of People’s Republic of China on Industrial Enterprises Owned by The Whole People guided by this theory, which legally determined principles of separating ownership right from management right, separating government functions from enterprise management, enterprises’ independent management and self-sustaining, increase of asset value, and etc. giving enterprises’ necessary management autonomy. At the same time, promulgation of the Law of the People’s Republic of China on Enterprise Bankruptcy (Trial Edition) legally hardened enterprises’ budget constraint, and laid a necessary legal foundation for enterprises’ market competitions.

The urgency of state-owned enterprises' reform came ultimately from more and more fierce competitions, especially from non-state-owned economy's pressures. With the manifestation of rural surplus labor force and the increase of urban unemployment pressure, township enterprises rose rapidly, urban individual economy got recognition and encouragement, and non-state-owned economy was no longer regarded as disaster. For a long time, government took non-state-owned economy as a necessary complement to state-owned economy. In fact, a more important role non-public economy's development played was giving competing pressures to state-owned enterprises and strengthening the necessity and urgency of reform.

Signaling by Deng Xiaoping's South Tour Speeches in 1992 and the CPC's Fourteenth Conference, Chinese leaders understanding of reform entered a new height. While determining that reform was to build up socialist market economy, they also realized that absorbing and learning all advanced management ways and methods which reflected the rules of modern socialized production from countries worldwide including capitalist developed countries was the only way for gaining comparative advantages over capitalism.

This round of state-owned enterprises reform aimed to establish "modern enterprise system" with clear property rights, well-defined rights and responsibilities, separation of government functions from enterprise management and scientific management. Based on academic discussions and some enterprises' piloted reform on joint-stock system, policy-makers adopted the form of corporatization, reforming governance mode of state-owned enterprises according to the principle "grasp the big and let go (privatize) the small". Particularly speaking, large and medium-sized state-owned enterprises with single investors in special production industries were restructured as wholly state-owned companies, and enterprises with multiple investors restructured as the limited liability companies or joint-stock limited companies, and developed a number of nationwide shareholding companies and cross-industry enterprise groups. Small state-owned enterprises respectively adopted contracted management, lease management, joint stock cooperative system, or were sold to collective or individuals.

Since then, enterprise reform generally continued the path of grasp the big and let go the small with main effects reflecting on the rapid decrease of state-owned economy's proportion, great increase of non-state-owned economy and non-collective-owned economy's proportion, strengthened competition, and hardening of enterprise budget constraint. For example, state-owned enterprises' income proportion in gross industrial output value decreased from 56.2 % in 1991 to 28.2 % in 1998, dropping down by 27.9 %. After 1998, official statistics only included figures of "enterprise above designated size".⁵ Calculated with this caliber, the proportion of state-owned enterprises dropped from 49.6 % in 1998 to 26.2 % in 2011 (see Fig. 3.1).

⁵ "Industrial enterprises above designated size", refers to all state-owned enterprises and non-state-owned industrial enterprises whose main business annual income reached 5 million yuan or more from 1998 to 2006; refers to industrial enterprises whose main business annual income reached 5 million yuan or more from 2007 to 2010; refers to industrial enterprises whose main business annual income reached 20 million yuan or more since 2011.

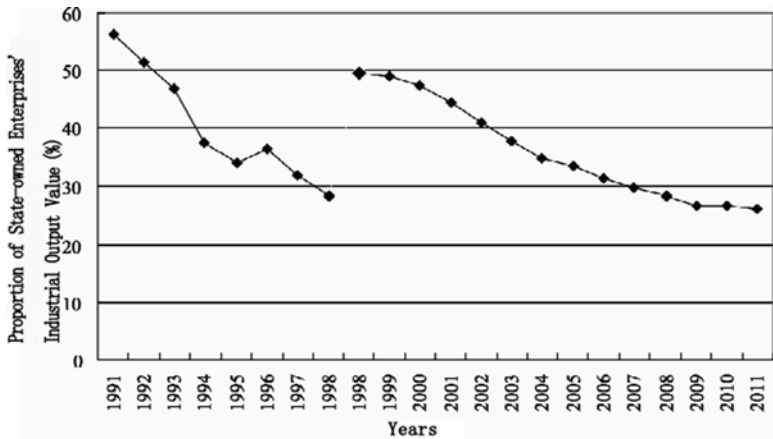


Fig. 3.1 Proportion changes of state-owned industrial enterprises’ output value (Source: *China Statistical Yearbook* Published by National Bureau of Statistics Calendar Year)

Under the condition of enhanced competition, state-owned enterprises indeed improved their efficiency significantly. At that time, the urgency of state-owned enterprises’ reform was mainly reflected in lack of competition pressure for a long time and autonomy not truly implemented, resulting in serious losses. For example, in the late 1990s, one third of national state-owned industrial enterprises suffered serious deficit. Aiming at this situation, through the implementation of “manage large enterprises well while relaxing control over small ones”, reducing staff to improve efficiency, hardening budget constraint and other reform measures, state-owned enterprises turned losses into gains gradually. After 1998, the management performances of state-owned enterprises improved significantly and total factor productivity acceleration also speeded up greatly. At the same time, the situation that diversified economic sectors coexisted and competed with each other had formed. Generally, enterprise governance structure had be improved, and micro efficiency had improved significantly.

Seen from Fig. 3.1, the popular saying in society that “state advances, while the private sector retreats” was neither a fact nor seizes the key to this problem. The problem was that state-owned economies were not limited to public welfare industries and non-competitive fields. They were also given monopoly power in pricing, workers’ income, preferential financing, excluding competition and other aspects. Depending on profits by this kind of monopoly, yet they did not turn over their revenue for fiscal spending used for public and social welfare in accordance with their state-owned property. Instead, they invested in competitive industries to compete with the people, gaining monopoly profits and exorbitant incomes. We can see that the problem of state-owned enterprises has been transformed into how to manage state-owned assets and how to form equal competitive conditions for all kinds of enterprises.

3.3 Market Competition Environment

In condition that micro production units have gained management autonomy and take profits as the starting point, whether price signals are proper or not determines whether enterprises really produce for market, whether they gain profits depending on good management, and whether they harden budget constraint. More importantly, price formation mechanism in fact determines whether allocation of resources is based on market. As the reform of enterprises took two paths, one was reform of state-owned enterprises' own incentive mechanism and governance mode, the other was bringing competitions through non-public-owned economy's development, reform of price formation mechanism also takes a double-track transition path.

In condition that state-owned enterprises' obtained autonomy for some self-marketing products and self-purchasing inputs, and non-public enterprises participated in competitions, the mode of distributing means of production and selling products uniformly by state planning was opened a gap. Some purchasing and selling were conducted on market outside planned distribution. Therefore, besides prices determined by planning, price outside planning determined by market supply and demand and its formation mechanism appeared. With the constant decreasing of planned production's share and increasing of non-public economy's proportion, the share of prices determined by market also expanded increasingly, and double-track system gradually unified to the track of market-determined price.

In economic transition process of centrally planned economies of former Soviet Union and Eastern Europe, many of them took shock therapy of suddenly liberalizing prices, which caused vicious inflation and led to stagnation or even regression of economic growth. In the late 1980s China once also tried to use package reform to correct distorted price signals. However, China soon suffered the threat of inflation, and China's price index of retail goods increased 18.5 % in 1988, achieving the highest inflation rate during the period of planned economy and reform and opening up. Therefore, this reform was called for a halt immediately and reform and development entered the period of rectification.

At the same time, double-track price system's pace of transition had not stopped, and a few years later, namely in the middle 1990s, parts of social retail goods priced by government or by its guidance became quite small. In the formation of prices of agricultural products and means of production, the proportion of market mechanism also improved to a great extent. Since then, price formation mechanism in product market finally realized marketization.

It is generally believed that Chinese factors of production market lags behind products' production. Especially price formation mechanism of capital, labor and land had not been fully marketized yet. Although this judgment that reforms in different fields are different has some basis, we should not deny the degree that market of production factors has developed to so far, as well as reform achievements in factors of production's price formation mechanism.

The development of capital market can be observed from three aspects: reform of bank system, development of capital market and marketization of interest rate.

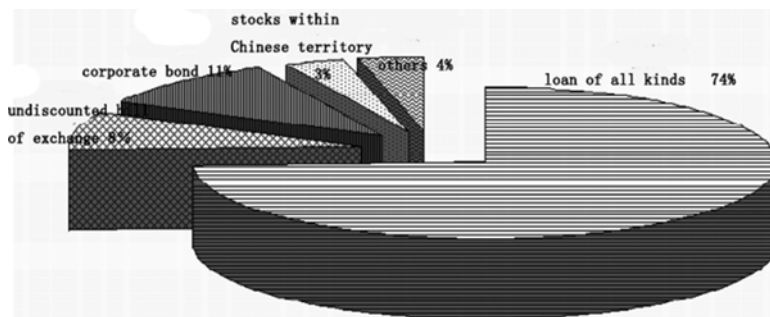


Fig. 3.2 Composition of total scale of social financing (Source: *China Statistical Yearbook 2012* Published by National Bureau of Statistics)

Taking implementation of “Loaning Instead of Allocating” as timing and logical starting point, reform of bank system began.⁶ An important progress clue for this kind of reform was the changes from People’s Bank of China unifying and controlling all financial operations throughout the whole country to successively separation of commercial banks from central bank, commercial banks from policy banks, and then securities industry and insurance industry from banking. At the same time, the joint-stock banks, local commercial banks and foreign banks gradually entered, having greatly increased competition factors. After joining the WTO, China completed the reform of major state-owned commercial banks for shareholding system based on the principle of building “modern financial enterprises”.

Although in the early 1990s, marked by two stock exchanges’ establishments in Shanghai and Shenzhen, capital market’s development broke through the ideology confinement of “belonging to socialism or capitalism”. However, stocks’ role in enterprise financing was not significant, since indirect financing was still the main form of financial markets. Seen from sources of investment in fixed assets, self-raised capitals occupied the biggest proportion. And in the total amount of capitals real economy gained from the financial system in 2011, namely, in social financing’s total scale of 12.8 trillion yuan, the proportion of various kinds of loan was as high as 74 %, while the proportion of financing through domestic stock market was only 3 % (see Fig. 3.2).

There really exists a reasonable proportion relationship between direct financing and indirect financing, which exists in reality and also in a certain extent, corresponding to the development level of financial markets. However, under the condition that indirect financing is given priority, degree of marketization interest rate determination was a more important benchmark of reflecting development level of financial market. Since liberalizing interbank lending rates in 1996 and taking the first step of interest rate marketization, China had successively liberalized bond market interest rates and gradually established interest rate formation mechanism of

⁶Yi Gang (2010).

monetary market and government bond market, setting a benchmark interest rate for government's interest rate adjustment, which was another important step to promote interest rate marketization. After that, People's Bank of China gradually called off upper limit of RMB loan interest rate, relaxing restrictions on upper limit of deposit rate and lower limit of loan rate, and in July 2013, comprehensively liberalized financial institutions' lending rates control. Until then, degree of interest rate's marketization had been greatly improved.

The development of labor market is promoted through two ways. One is that since the late 1980s, rural labor forces' cross-regions, cross-industries and cross-urban and rural areas' large-scale transfers. Enterprises absorbing these transfers of labor forces included non-public enterprises and some public-owned ones which produced for market. As a result, these labor employments were market-allocated from the beginning, and workers' wages were close to market equilibrium level.

Many people think that determination of migrant workers' wages is affected by institutional factors. Therefore, it is a kind of discriminatory wage rather than market wage. Admittedly, as household registration system exists, migrant workers' employment is often limited by policies. Also, under the condition of dual economy, wages do not fully reflect workers' marginal productivity. However, compared with state-owned enterprise employees' wage determination, migrant workers' wages are mainly affected by labor supply and demand, thus they are with higher degree of marketization.

Another path of labor market's development is under competition pressure from migrant workers, state-owned enterprises have mainly changed mechanisms of labor allocation and wage formation incrementally through employment system reforms of cutting down stuff to improve efficiency and "break the iron rice bowl". In the late 1990s, China suffered macro economic downturn, Southeast Asian financial crises as well as overall loss of state-owned enterprises, resulting tens of millions laid-off workers. Laid-off workers and unemployment labors could only go to labor market to find reemployment opportunities. Thus market-oriented allocation of labor sources was formed.

After entering the twenty-first century, especially with China's accession to the WTO, its economy growth recovered. All kinds of enterprises restored their capability of creating employment, and state-owned enterprises helped laid-off workers for re-employment. At this time, they adopted market-oriented wage determination mechanism and way of employment. At present, migrant workers, urban workers and all kinds of graduates are no longer assigned work by the government. Instead, they look for jobs in the labor market, negotiate wages and working conditions, and sign labor contract.

In the early 1980s, when the system mode of collective-owned land and family management were established in rural area, the constitution revised in 1982 specified that urban land was owned by the state. Marketization process of land resource allocation was based on these two kinds of ownership system forms, following basic agricultural management system, and in accordance with the principle of usufruct in property law.

First of all, household contract system, especially after the second round of contracting, clearly defined farmer's land contract rights, stabled their management expectations, and also promoted re-allocation of rural land resources, showing a "Soto effect".⁷ For example, under current forms of rural land property rights, sub-contracting and subleasing of farmers' contracted lands have widely existed between farmers, thus to support labor's transfer to urban sectors. Farmers give their contracted land to companies to manage in the form of taking stakes, and receive agricultural economies of scale. Farmers use management rights of contracted land for mortgage loan and improve their financing ability. In general, farmer's land usufruct is guaranteed, and at the same time, land resource allocation efficiency is improved.

Second, rural land's transferring to nonagricultural use within the framework of laws, regulations and planning has effectively supported the industrialization and urbanization process. Based on the rural collective construction land, in the 1980s and 1990s, township enterprises surged up rapidly, while small towns had also developed by leaps and bounds, both of which became important driving forces of industrialization and urbanization at this time. By strict examination and approval in accordance with the planning, rural collective land was turned into state-owned for public use or commercial development, which was important land guarantees of greatly developing non-agricultural industries, speeding up infrastructure construction, and prompting urbanization in the whole reform period.

Current land system has also been criticized by many participants and observers. Existing problems include that local governments are over dependent on GDP growth and fiscal income gained by developing land; compensations farmers get from land development are too low, while developers and investors make lots of money quickly; land circulation speed lags behind requirements for labor transfer, and legal obstacles of using land management for mortgages and stock management still exist; consensus on problems as whether the red line for guaranteeing food security is reasonable or not and how to maintain it has not been reached yet.

In recent years, a series of local tests on land system reform have been conducted. The first is the collective rural land rights registration throughout the nation, aiming at solving land ownership disputes, safeguarding farmers' land rights, confirming and safeguarding farmers' land property rights in accordance with the law, and creating conditions for construction of urban and rural unified land market. The second is test for land circulation tickets system. The third is some areas trying to use management rights of contracted land for mortgage loan. Most test results have not been concluded yet, but they are undoubtedly beneficial attempts aiming at solving the above problems.

⁷ Peruvian economist Soto points out that land used by the poor but with no clear property rights has big potential value, with which foreign investment, credit and all kinds of aids can not match. See Soto (2007). Therefore, we call land value increment and capitalization realized by utilizing the right for land potential profitability generally as "Soto effect".

3.4 Development-Oriented Government

In the whole process of economic reform, the government's economic functions have realized important changes, from control of all economic affairs, such as allocation of resources and factors of production, determination of prices for products and factors of production, unified collection and expenditure of enterprise finance and direct replacement of enterprise for management decision-making, to manage economy indirectly through macro-control means, industrial policies and regional development strategy, forming a specializing and complementing relationship with the market. At present, the structure that allocation of product and factors of production mainly relies on market mechanism, enterprise makes management decisions independently and government provides public service has been formed.

At the same time, it is widely noticed that in China's rapid economic growth, the extent and ways of roles central and local governments have played are obviously different from commandment of governments' economic functions written in standard textbook. This kind of government role with Chinese characteristics is quite active, having effectively promoted economic growth so far, while also inducing many problems. Therefore, Chinese government's this performance in economic growth is not only reform products, but also to a great extent should be the subject of further reform.

The urgent desire of developing economy and improving people's standard of living, along with local fiscal decentralization and cadre assessment system, have induced local governments' strong motives of GDP growth and tax revenue growth, stimulating local governments' competitions for pursuing development speed. As any observers can see, the local government usually plays the role of entrepreneur, directly involving in investment promotion, planning and construction, "seeking favor from ministries" and other activities, so that some scholars straightforwardly call this type of government respectively as development-oriented government, entrepreneur government, or competitive government.⁸

For this, some observers marvel at Chinese government's resource mobilization capability, while some are critical about that, negating totally government behavior of pure pursuit of GDP growth. Professor Steven Cheung thinks that system inducing fierce competition among local governments, which he specifically refers to governments at the county level, has created "economic growth almost of wonders", thus "it is the most effective system for economic growth in human history".⁹ Whether we accept any research conclusion or not, we must admit that competitive government is indeed an important factor of China's rapid economic growth. Therefore, even if it is a deviation needing to be corrected, fairly exploring its rational foundation is also necessary.

First of all, only economic growth can improve total economic output and the level of per capita income, thus to reflect local government performances with hard

⁸For example, Herrmann-Pillath and Xingyuan Feng (2004).

⁹Steven Cheung (2009, pp. 146, 165).

indicators. No matter how many disputes exist, GDP is still the most important information to fully measure economic growth. Besides, for countries and regions with very low starting points, development is indeed the absolute principle. Therefore, it is understandable that pursuing of GDP becomes direct target of competitive government.

Second, many government officials believe that economic growth has a straightforward corresponding relation with employment, and further with family income. Therefore, promoting growth is also ensuring people's well-being. In quite a long time, governments at all levels believe that economic growth can automatically bring employment growth, thus improving people's living standards. Therefore, every time economic fluctuation and downward trend appear, even when central government deliberately regulate the phenomenon of overheated economy, local government always righteously or secretly maintain their expectations for economic growth in the name of ensuring employment.

Finally, only when GDP increases, can tax revenue increase and social policies such as basic social insurance and minimum living allowance be implemented, providing better public services in compulsory education, indemnificatory housing and other fields, so as to realize coordinated development between economy and society. This is why after the Party Central Committee puts forward people-oriented scientific concept of development, especially after emphasizing the requirement of coordinated development between economy and society, different regions have not lost any enthusiasm for GDP competitions.

It is quite obvious, at least on the surface, the pursuit and comparison of economic growth rate can make both the central government and the common people satisfied for local government and its officials, why not do it?

If breaking through the confinement of neoclassical economics, we have sufficient reasons to say that the government has played a positive role in the process of reform and opening up as well as economic development. For example, promoting reforms needs government to build consensus, as well as design and implement specific programs; in the process of gradual transformation from planned economy to market economy, the mechanism of market-allocating-resources can not reach the designated position with one step, thus specific government functions are needed to compensate the vacuum of market; under the condition that credit system needed by market economy is not completed, especially when system vacuum is formed in the shifting process from planning method to market mechanism, lack of market transaction parties' integrity needs to be complemented by corresponding government functions; When pure entrepreneurship is not provided with, it is necessary to depend on government officials' human capital to seize the opportunity of economic development.

However, in areas where government functions promote economic development, it is also easy to cause problems of "too much of a good thing", so that an eternal topic about the relationship between government and market is formed in economics. In the period of China's reform and opening-up, excessive interventions indeed existed in some governmental measures of promoting rapid economic growth, such as industrial policies, regional policies and macroeconomic regulation and control

policies. Therefore, market mechanism's efficient allocation of resources was hampered, which even hindered further reform of economic system.

First of all, policy measures aiming to support certain strategic industries and government strategy implemented to balance regional development generally rely on large projects as well as state-owned enterprises' leading role and "influence" to implement. Besides, macro-control policies tend to stress on "protect and constrain", which originally means protecting investment favorable for employment and optimization of industrial structure, and constraining investment for industries with high energy consumption, high pollution and overcapacity. However, in case of using administrative means excessively, it is easy to fall into the situation that big projects and state-owned enterprises are protected, while private investment and non-public economy are constrained.

Accordingly, these large construction projects, "strategic" industries and state-owned enterprises being protected tend to be over dependent on policies, in turn, they use their influences on GDP and tax revenue's increase to capture policy-making and policy tendency to maintain their privileges of subsidies, monopoly status and soft budget constraint. The results are that small and medium-sized enterprises and private economy's development space is inhibited, freedom to enter and exit industry is interfered, allocation efficiency of factors of production is reduced, and competition mechanism of survival of the fittest is damaged.

Second, government-led and investment-driving industrial policy and regional policy gradually evolves into a kind of surpassing strategy, which has some similarities with the strategy of "heavy industry as development priority" in the period of planned economy, namely giving preference of financial support to large projects and large state-owned enterprises, suppressing for small and micro enterprises financially and hindering financial system reforms. For example, when giving large state-owned enterprises abundant and low-cost loans, state-owned banks need to maintain their own profits, thus they need to lower interest rates on deposits, which in fact forms a situation that depositors subsidize enterprises, distorting the pattern of national income distribution.

Third, government fiscal funds, which play an important role in this type of investment, also have soft budget constraint, since the distribution lacks market assessment. Therefore, they become a kind of rent, contributing to rent-seeking incentives of local government, investors and corporations, which also lead to the failure in prohibiting corruption and corruption is flourishing. For example, fiscal transfer payment, as is widely criticized, has only a few funds for general project yet abundant funds for special ones. The reason that this situation has not been changed for a long time is that some departments set and build rents. Existence of this situation not only suppresses potential innovative activities as a result of the deviation from principle of resource allocation efficiency, it also hinders direction of reform from financial system to public finances, and progress of reform has been delayed.

In addition, economic growth competitions between local governments have indeed motivated government officials' working enthusiasm; however, linking investment performance to officials' personal economic interests and promotions distorts evaluation and incentive mechanisms of officials' working performances.

Steven Cheung finds that in some of governments at the county level, 1–2 % of the attracted investment capital can be rewarded to officials who have contributions for the investment.¹⁰ The phenomenon that government officials gain commissions undoubtedly corrupts the atmosphere of official business. At the same time, they don't have to be responsible for investment effects, so that it is easy to get things alienated to the situation of attracting investment only for getting commissions.

Finally, this kind of local governments' competitions for attracting investment and capital will inevitably leads to their competitions for lowering prices of factors of production, resulting in artificial distortion of cost of production. Land expropriation compensation for farmers is very low, so that there is a huge space between land cost and auction price. In order to attract investment, many local governments promise land prices far lower than the market level and provide land for free in many cases. Even "Zero premium" of offering "three supplies and one leveling" is very common. Even so, local governments still benefit a lot from selling land, and many of them earn big on land, thus local finances depend seriously on land sales.

In recent years, especially since 2009, local governments have been bold in debt financing, ensured by land revenue. According to the audit investigation of National Audit Office, local governments' debt reached 10.7 trillion Yuan in 2010. Then it further accumulated and may have exceeded more than 12 trillion Yuan in 2012. This kind of government debt grows too fast, and depends too much on land revenue; therefore, there exists big risks. For example, some local governments' debt of repaying capital with interest in 2012 may have reached 1.25 times the size of disposable land income, and a large part needs to be repaid by raising new debt or financial income. In addition, there are many violations and corruptions in the management of such debt.¹¹

Economic growth competitions between local governments also tend to underestimate the costs of resources and environment, leading to economic growth income difficult to compensate for the costs of resource exhaustion and environmental damage caused by it. Although labor price is determined by market, yet as a result of existence of system obstacles as household registration system, migrant workers haven't enjoyed equal basic public services. Social insurance coverage is very low, and some companies intentionally circumvent the implementation of minimum wage system and other labor laws. All these above have caused that labor cost is artificially hold down. And local governments' enthusiasm for competitions becomes their intrinsic motivation of impeding household registration system reform.

Development-oriented government with Chinese characteristics formed in the reform process has undoubtedly made important contributions to rapid economic growth so far and we can indeed summarize useful experiences from it. However, should we accept Professor Steven Cheung's conclusion to think that competition between local governments is a "most effective system"? Although as an empirical science, its research conclusion should not be too absolute. However, problems

¹⁰ Steven Cheung (2009, p. 158).

¹¹ Liu Jiayi (2013).

intrigued by government-leading growth pattern apparently do not support such a conclusion.

How we look at this pattern of local governments' competition for economic growth not only refers to evaluation of former reform effects, but also has close relationship with the choice of further reform direction. We say nothing else but Cheung's views that competitive governments could reduce corruptions and labor force should not be protected by labor contract are not correct conclusions, and are not good for choosing the right reform directions and agenda.

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Chapter 4

Globalization and Chinese Factor

Whenever economic globalization originated, since China's reform and opening up in the early 1980s, especially since China joined the World Trade Organization (WTO) in the early twenty-first century, undoubtedly it is deeply involved in this historical process, and becomes well-known worldwide the beneficiary of globalization. However, China's experience does not prove that globalization can benefit all participating countries unconditionally. As politicians, entrepreneurs and scholars have agreed, not all countries can benefit equally from globalization, and not all groups in a country can equally benefit from that country's participation of globalization. In many aspects and many cases, globalization has even caused the Matthew effect of "the poor poorer and the rich richer".

It is clear that the fundamental reason that China can maximize the benefit from globalization is that while participating deeply and making full use of external conditions globalization provides, it gives full play of Chinese factors such as institutional advantages and economic development conditions. In other words, China sets foot on its national conditions, adheres to reform and opening up and promotes development, making full use of the positive factors of participating in global economic division, avoiding the negative factors as possible as it can, thus to become a classical example of giving full play of comparative advantages to realize economic catch-up.

4.1 Meaning of Globalization

It is generally believed that globalization arose in the 1950s. However, there are also some people who think that globalization should be traced back to earlier, for example, Britain in the middle and late nineteenth century, since Britain was the world's largest economy at that time, with its GDP accounted for nearly 10 % of the world as a whole, the ratio of exports to GDP exceeded more than a third, and about 60 % textile production were exported. By the late nineteenth century, about 40 % British domestic savings were used to invest overseas. However, it was more like a scene in

the monologue with the title “globalization of one country”. The bases of taking this as the origin of globalization are not enough.

Globalization having real impacts worldwide and brand new contemporary characteristics did not become a phenomenon of world universal attention until the turn of twenty-first century from the twentieth. Westerners believe that the New York Times represents focus of global opinions; therefore someone made statistical analysis and found this newspaper’s publication of articles about globalization debates reached the maximum in 2000 throughout history, never before and never again. Famous journalist Thomas Friedman argues that about huge changes of world political landscape and a series of brand-new technical inventions and applications turned the world smaller and smaller at that time, while at the same time, leveled competition starting line of different countries continually.

Opinions about whether globalization is the Gospel or disaster are various and have brought a lot of debating. On January 30, 1999, I was visiting Washington University at Seattle. I happened to encounter that tens of thousands of protesters gathered in Seattle to protest against the WTO Trade Ministers’ Meeting. That morning I was told that there was a protester, who climbed up the pole and not got down, declaring protestation against globalization. Later I learned that protesters also destroyed the McDonald’s, which is a symbol of globalization, and had fierce clashes with the police. From then, any worldwide conferences or forums themed as globalization almost all encountered intense or even violent resistance. Although this kind of anti-globalization movement can be cracked down by the police, and street protesters do not have real discourse power after all, yet conferences aiming to reach consensus on this or that of globalization are mostly aborted in this protest atmosphere.

There is no consensus on the definition of globalization in opinion circle or theoretical circle, and people also have their own motivations respectively to participate in activities of opposing and rejecting globalization. For example, some are for refusing the invasion of the capitalist system and way of life, some are for their fear of foreign competitors, some are for defending labor interests from the harm of industrial decline, still there are others equating globalization with environmental degradation, or simply blaming all their dissatisfactions for reality to globalization and regarding it as the root of all evils or scapegoat, to name but a few.

Let’s return to economics’ understanding of globalization. As early as economics was born, Smith saw the productivity differences between countries, the so-called absolute advantage or absolute inferiority of productive capacity, while Ricardo found that even if a country’s productivity of all products were lower than another country, it could still have comparative advantage in the production of certain goods. Since then, modern economists including Heckscher, Ohlin and Samuelson put this into theories and models, forming the famous theory of comparative advantage, which we must learn in economics class.

Therefore, we have got the first definition of globalization in economics. A relatively narrow statement commonly accepted is that globalization means mass global flow of goods and services. Since every country has comparative advantage and can benefit from trade, more and more countries participate in international trade of

products and services, as well as expand it to an unprecedented scale, which is a natural process of making global yield.

China's reform and opening up since the 1980s was undoubtedly involvement into globalization. And then China's active participation in negotiations and application to join the General Agreement on Tariffs and Trade Organization, which is the World Trade Organization (WTO) today, and eventually entrance to the WTO in 2001, mean that it has a more active stance in joining globalization. For China, entry into the WTO means opening to other contracting countries, as well as enjoying more favorable access of goods and services, platform to solve trade disputes and sayings on the rules of international trade in the premise of necessary transition period, thus it can gain a better environment for trade development.

Located in East Asia, China also enjoys a regional advantage, making it obtain the benefits of economic globalization more significantly. That is to become a part of the so-called "Flying Geese Model". At Nagoya University in the 1930s, Kaname Akamatsu was about to begin his career of economic research after studying in Europe and the United States. Soon he put forward the theory of "Wild Goose Queue Effect", which was well known later and was called "Flying Geese Pattern" in Japan, "Flying Geese Paradigm" in English.

At first, this theoretical model is only used to describe how Japan, as a lately developed economy, has used the change of dynamic comparative advantage to complete a completed "import-import substitution-export" catch-up process. Since then, through many economists' contributions, such as Kojima, it has become popular gradually and is used to explain and understand East Asian economic development mode, which is according to the dynamic change of comparative advantage, labor-intensified industries have transferred among the Four Asian Tigers, East Asian countries and then China's coastal provinces to promote the region's economic development and catch-up.

Therefore, many researchers take China's participation in globalization, the process of turning rich and cheap labor forces to competitive manufacturing industry products, as a part of "Flying Geese Pattern" formed in East Asia. By this way, globalization's connotation is extended, which means globalization is not only expansion of products and services around the world, but also the expansion of capital flow as never before. Since the 1980s, comparatively better developed economies in East Asia gradually abandoned gradually the manufacturing of labor-intensified products, realizing industries' upgrading to be more capital-intensified and technology-intensified. At the same time, starting from the establishment special economic zones and opening of coastal cities, China gradually realized its overall economic opening up, receiving labor-intensified industries and introducing foreign direct investment. It has finally become the center of global fabrication, and is named global factory worldwide.

Paul Romer, who is widely known as the father of the endogenous growth theory, emphasizes people's role of intentionally conducting researches and explorations to promote technology advances in economic growth. As a result, in his opinion, globalization is more an idea's flow globally. In fact, this definition has not contradicted the principle of comparative advantage.

First, it is an extension of comparative advantage theory in concept. As Bernard Shaw says, if you have one apple and I also have one, we each still have one after we exchange them; yet if you have one idea and I also have one, we can both have two ideas after we exchange them.

Second, the flow of ideas usually needs to depend on forms as globalized trade and flow of factors of production. Through trade of products and services, as well as introduction of foreign capital, developing countries can learn advanced technologies and administrations. Human capital flows across the countries in a scale never seen before through negotiations, visits and studying abroad, which is more a chance of widely exchanging and absorbing ideas.

4.2 Catch-up and Convergence

If we define globalization traditionally according to the trading scale of goods and services, we can say that China's opening up has undoubtedly made marvelous achievements. In addition that China has attracted large-scale foreign direct investment, as well as exchanges of people and ideas, it has broken through supply bottleneck of capital lacking, management, technical level and human capital gap, and insufficiency of resource allocation capacity. Other countries demands for products, for which China has comparative advantages, have also helped China to fill the demand gap needed for high speed growth.

Many researches prove that the process of lately developed countries' catching-up with developed countries is not as easy as early neoclassical growth theory had expected. Theoretically, due to the law of diminishing returns of capital, lately-developed countries can gain a higher return on capital than developed countries. Once having necessary system conditions, policy preparations and factors of production supply needed for economic growth, they can achieve the goal of convergence with faster growth speed. However, although convergence is not without precedent in reality, it is as rare as morning stars in human economic history.

Some studies on growth have found that the long time needed for convergence is depressing. Even if lately developed countries in economy have possessed all conditions of economic growth the same as developed countries, and enjoyed advantages of backwardness in technology and system, thus it can implement economic catch-up strategy with faster growth, the process of convergence is still prolonged. This is because there is a huge economic development gap in today's world, which is the result of economic growth difference for a long time. For many typical rich and poor countries, if we want to explain the huge difference between them in overall economy, per capita income and quality of life, we need to trace back to the industrial revolution in the late eighteenth century and early nineteenth century, as well as the "great divergence" worldwide caused by it.

In other words, the gap formed in hundreds of years might need the same length of time to be eliminated. Economists Barro and Sala-i-Martin have given an example to explain the long time to realize catch-up. America's GDP per capita was \$18,000 in

1990, which was 285 times of Ethiopia’s \$285. They imagine, if America no longer grows, and Ethiopia keeps its average annual growth rate of 1.75 %, which has been maintained by America for a long time, it needs 239 years to realize convergence. Even if Ethiopia’s growth rate raises 1 percentage point, namely it keeps Japan’s long-term growth rate 2.75 % to catch up, it still needs 152 years to catch up with the invariable America.

Theories and experiences above tell us that for growth rate slow as the spring drizzle, it is impossible to realize economic catch-up; a high-speed growth as a tempest is needed to achieve convergence effect substantially. A well-known rule of thumb in statistics “rule of 72”, namely if an economy grows at 1 % a year, it needs 72 years to double itself; if it grows at 7.2 % per year, it needs 10 years to double itself; and if it grows at 10 % per year, it needs only 7 years to double itself. During the period from 1978 to 2011, China’s average annual GDP growth rate approached 10 % and is expected to reach around 7 % in many years after the first ten in the twenty-first century. Therefore, we have got an interesting “Summers Assumption”.

Lawrence Summers is an economics talent not punctilious, who likes to imagine how future historians view the age we live in. He thinks that 300 years later, when people write our history of today, they may not remember the ending of the cold war, nor the “9·11” event. What they will write repeatedly or elaborately is that the first time in human history, China with its rapid economic growth has realized that living standard in a man’s lifecycle can be increased by more than 100 times, as well as the important effects China brings to people from other countries in the world and to global economy.

Strong desire of catching up is the original intention of the birth of development economics, and revelation of the reason of convergence is the driving force of economy growth theory’s evolution. The story of China’s economic catch-up and convergence, as well as its relationship with globalization, will inevitably make important annotations for globalization and related theories. In particular, for a lately-developed country, to catch up with developed countries, it not only faces with factors in the supply side’s restriction on growth, but also that from the demand side. To understand how China benefits from globalization during the period of reform and opening up, we can focus on factors from two aspects—supply and demand.

4.3 Break the Supply “Bottleneck”

Let’s first look at how globalization helps China break through constraints of economic growth on the supply-side. Factors of economic growth on the supply-side generally mean factors of production supply and productivity improvement capabilities, which usually constitute a lately developed country’s growth “bottleneck”, including supplies of capital, technology, labor and human capital as well as the improvement of total factor productivity.

More specifically, in a growth account formula describing economic growth process, when you put GDP growth on the left side of equal sign as variables to be explained, all independent variables explaining growth performances on the right

side of the equation are factors of economic growth on the supply-side. Most researches conducted on this kind of quantitative analysis of growth account generally choose variables as capital accumulation, labor supply, human capital (workers' education standards), total factor productivity, and etc. to explain economic growth rate. Participate in economic globalization's forces on these variables, or opening up factors' promoting effects on supply and utilization of factors of production as well as on productivity improvement, could be described as globalization's contribution to the potential growth rate.

For early development economists, developing countries' "bottleneck" factor on the supply side to realize economic take-off is capital accumulation. Traditional economic theories emphasize a lot capital accumulation's decisive role in the process of economic development. The Famous Harrod-Domar growth model, which has dominated economic growth theories for many years, just focuses on one factor-namely, saving rate. Yet some development economists simply take a certain level of saving rate as a necessary condition for economic take-off.

For instance, Lewis and Rostow respectively puts forward necessary rate of capital accumulation to realize economic take-off. Lewis believes that the core issue of economic development is rapid capital accumulation or how to increase saving rate and investment rate from 4–5 % or even lower, to 12–15 % or even higher. In Rostow's view, economic growth usually proceeds along five stages: (1) Stage of traditional society; (2) Stage to create premises for take-off; (3) Stage for taking-off; (4) Mature stage; (5) Stage of high mass consumption. He takes saving rate and investment rate's increases from 5 to 10 % or higher as a necessary condition for the key stage of economic take-off.

Starting from neoclassical growth theory, technological progress and productivity improvement are more emphasized. Solow finds that economic growth performance includes a part that cannot be explained by the factors of production inputs. In condition that people do not know what this growth composition is, they call it Solow Residual on statistics. Later, economists find this residual reflects various factors as technology advances, which can improve productivity, thus they call it total factor productivity. Solow proves that under the condition of diminishing returns to capital, it is the only source of promoting sustainable economic growth. Starting from this Solow dogma, many economists have doubted "East Asian miracle" and predicted its economic growth can not be sustained since these economies lack of productivity and only rely on capital and labor inputs.

Here is an interesting story. The World Bank published a report in 1993, introducing firstly to the world "East Asian miracle" represented by Four Asian Tigers and other economies' economic growth performances with its authority. After this report, not to mention debates about the causes of East Asian miracle, opinions were various on whether the so-called "miracle" existed or not. A number of scholars good at econometric analysis such as Alvin Young and Lawrence Lau find the reason that those countries and regions having created "East Asian miracle" have achieved good performance of high-speed economic development is in fact by input increase, rather than by productivity improvement. Once excluding factors of investment, "miracles"

disappear immediately, as “falling from the top of Mountain Olympus to the plain of Thessaly”. This is also the conclusion drawn from factors on the supply side.

However, after the Four Asian Tigers and Chinese mainland’s successful economic catch-up, seen from today, it seems that this view is wrong. As for why economists have made errors in judging the East Asian miracle, and whether their theoretical and empirical studies have some reasonable parts, we will continue to discuss them in later chapters. Here, we only need to observe one fact that owing to the high cohesion of China’s demographic transition stage and economic take-off stage, it has not only broken the “bottleneck” of capital accumulation successfully, but also broken through the assumption of neoclassical growth theory-diminishing returns to capital.

For a backward country in economy, low per capita income means capital accumulation which can be used for investment is insufficient. This truth has long been clearly explained by the “Vicious Circle of Poverty” Hypothesis. It is based on Malthus’ Poverty Trap Theory, which assumes that in poor countries, income improvement often leads to population growth and the later in turn drags income back to living level. When China began its reform and opening up in the late 1970s and early 1980s, its per capita GDP was less than \$200, thus it undoubtedly met the standard for backward countries. Therefore, according to “Double Gap” Theory in development economics, which means when domestic larger investment than saving leads to capital insufficiency and trade deficit leads to lack of foreign currency, introducing foreign direct investment undoubtedly helps China to break the “bottleneck” of capital accumulation significantly.

However, this is not globalization’s main contribution. Or we can say before understanding globalization’s positive role on capital accumulation, we need to first understand how globalization turns China’s special population factors into demographic dividend, which promotes economic growth directly. Since the middle 1960s, China’s dependency ratio of population (i.e., the ratio of dependent population to working-age population) began to decline, as a result, during the period of reform and opening up, China’s accumulated potential energy for demographic dividend could be fully released.

Under China’s special circumstances, cashing potential demographic dividend is the most important factor of participating in economic globalization. Under the condition of possessing a large number of labor force surplus, only when transforming cheap labor force into resource comparative advantage condensed in labor-intensive products through international trade and then gaining international competitiveness and market share, can demographic dividend be fully cashed. Once being provided with this condition, demographic dividend’s manifestation of working-age population’s increase will also have an important influence on this growth factor-capital accumulation, meaning not only low and declining dependency ratio of population is benefit for achieving high saving rate, but also infinite supply of labor force can play an inhibiting role on decreasing returns to capital. Therefore, we can say that if there is no globalization, demographic dividend is only a potential gift rather than growth factor and the growth condition of capital accumulation can not be fulfilled.

Of course, there's no doubt that introduction of foreign direct investment also has positive effects. In addition to investment on scarce capital itself, foreign direct investment enjoys more loose policy privileges; especially that it has less government interventions in the management process, which becomes a kind of system advantage. Combining with technology, management and market brought by foreign investment, they usually have a higher resource allocation efficiency, which is also a globalization factor more important than capital itself.

As early as in the period of planned economy in the middle 1960s, China's dependency ratio of population began to drop down, and in the middle 1970s, growth rate of working-age population was significantly faster than whole population growth rate. That is to say, demographic factors had potentially possessed the conditions for generating demographic dividend. It is regretful that at that time, China was in the period of "cultural revolution", not only economic construction had no status in policy, but also there existed a series of system factors hindering economic growth.

Although history can not be assumed, yet economists often like to make some assumptions acceptable in theory, intending to illustrate that without the occurrence of a certain situation, history could have been different. For example, a simulation made by two economists shows that if there were no "Great Leap Forward" in the late 1950s and "cultural revolution" 10 years later, China's economic growth after 1958 could have been totally different, namely by 1993, its labor output could be 2.7 times of the actual value.¹

We can see that, since system conditions for economic growth is lacking, not only favorable demographic factor has not been converted to the source of growth, but also been accumulated into redundant rural labor forces and urban enterprise workers due to stagnant growth and institutional constraints. However, this status of labor force surplus has been excavated under the condition of reform and opening up, becoming the source of economic growth.

In the process of export-oriented labor-intensive industries' development, a series of important labor force transfers have appeared. Since industries participating in globalization are necessarily export-oriented, mostly concentrate in economically developed areas taking the lead in reform and opening up, and are mainly dominated by non-public economy, the transfer of agricultural labor force surplus follows the modes as from agricultural to non-agricultural industries, from the Midwest China to coastal areas, as well as from previous state-owned enterprises to non-public economic enterprises. Realization of such a labor transfer process means more efficient allocation of resources. In the period of China's reform and opening up, this efficiency of resource re-allocation constitutes an important part of total factor productivity.

Krugman has once quoted a fable in economics textbooks: an American company claim to have made a mysterious "technology innovation", and put it into practical application, transferring this country's abundant wood and wheat into consumer goods of huge market demand, thus to earn a great deal. However, after investigat-

¹ Kwan and Chow (1996).

ing seriously, people found that this company did not have any real technology. It just carried wood and wheat to Asia and then exchanged them for manufactured goods needed by consumers. After all, this company just simply used the principle of comparative advantage to do trade. Krugman’s intention for telling this story is to show us that trade is not mysterious; it is only a management process just like producing and manufacturing.

However, we can extend from here a different, but more useful meaning. The company in this example exchanged back products needed by domestic market with the help of international trade rather than technological innovation to realize the target for profits. By the same way, a country can absolutely achieve the same economic growth as technology innovation or productivity improvement through using comparative advantages to participate in economic globalization. That is to say, the realization of comparative advantage in international division of labor has the same effect with technology progress, which promotes economic growth.

We can see that participation in economic globalization helps China break through the “bottleneck” of factors of production’s accumulation and obstacles of productivity improvement, ensuring that in more than 30 years of reform and opening up, China’s economy has obtained unprecedented rapid economic growth. When reviewing how globalization promotes positively China’s economic development, we can not only observe the miracles created by GDP’s actual growth over the past 30 years from the statistics, but also through analyzing these data, make more in-depth observations on the formation of higher potential output capacity owing to that factors of production are more fully developed.

In Fig. 4.1 we give out not only real GDP growth rate realized per year on average for 30 years from 1979 to 2009, but also average annual GDP potential growth rate estimated. The latter is output capacity which can be gained due to the full use of

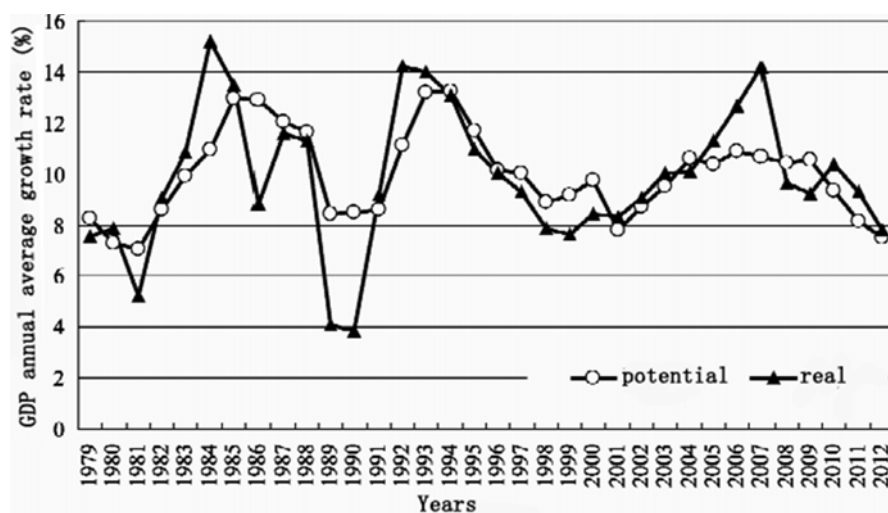


Fig. 4.1 Potential and real economic growth rate (Data Source: Fang Cai and Lu Yang 2013)

labor, capital and land resources, as well as continuous improvement of productivity. Once demand-driving factors can meet the requirements of this output capacity, consistent real growth rate can be realized.

4.4 Is This “Toil Just For The Benefit of Others”?

Domestic scholars have always been critical on China's greatly involvement in international division of labor to become factory of the world and manufacturing center. They think the exportations of low-end manufacturing products are working for multinational companies, namely toil just for the benefit of others. In the absence of in-depth, objective and scientific economic analysis, this criticism seems undoubtedly logical and quite consistent with Chinese people's feelings. Therefore, no matter in media or in theory circles, this view is very popular. Let's first look at the three links included in this understanding.

First, countless facts show that the exportation process of manufacturing products is mostly controlled by multinational corporations. In fact, manufacturing of products with “made in China” just put the simple machining parts in China, while the parts with the highest value-added ratio as product brand, design, marketing, after-sales service and other such processes are controlled by foreign companies. Factories in China only earn a negligible tiny fraction of profits. For example, according to the report of *New York Times*, researchers of Silicon Valley break down the iPhone 4 to find that in this product from Apple Inc., the manufacturing process with the smallest part of costs is in assembly plant in Shenzhen, while more than 100 kinds of components with high profits are respectively microchips made by Germany and South Korea, mobile phones chips for wireless Internet or cell phone signals made by America, touch screens made by Taiwan and so on, not to mention the huge profits earned by Apple Inc. as products developer.

Second, China's massive exportation fed by these low-profit enterprises causes huge surplus with the United States and Europe, thus to form the largest foreign exchange reserves. In the absence of safe and reliable investment, these foreign exchange reserves are in turn invested in developed countries, especially in the fields with low rate of return but big risks as United States Treasury bonds, which generally have negative returns. Such investments not only bear the losses of dollar depreciation, some even down the drain in the case of financial crisis.

Third, although China's high saving rate and America's high debt rate are complementary, helping the later to maintain a low-saving and high-consuming mode, nevertheless it is China that is endlessly criticized, such as being given the bad name of manipulating exchange rate, setting up sweatshops, having high carbon emissions, as well as being the source of global economic imbalance, and etc. Accordingly, these moral framings often transfer into constraints in action. China, as an active participant in global trade, has become the direct object of all kinds of trade protection measures more and more often, facing growing obstacles in opening to the outside world.

It is clearly seen that China being the workshop of the world is not always full of glory, but also with difficulties and hardships everywhere. For, we will make necessary analysis on international misunderstandings and wrong actions some countries have adopted in the next section, clarifying the facts on the basis of theory and reality. Here, we need to have a look at whether China can avoid the big tide of economic globalization from the beginning. In other words, combining China's participation in international division of labor with the necessary conditions needed by high-speed growth in the period of reform and opening up, the conclusion will be quite obvious.

In the condition of having higher potential growth rate, we still need some demand factors for support to achieve high growth. Even when factories, machines, workers and technicians used for producing some products are all ready and transportations and other infrastructure capacities are sufficient to ensure energy supplies and product transportations, still, the actual manufacturing process of a product can not get started if buyers of this product are lacking. By the same way, potential producing capacity with no support from demand can not be transformed into real economic growth. In general, the demand factors of economic growth are summarized as final consumption demand, investment demand and export demand, namely “the Troika of Demand”, among which the level of consumer demand depends on state financial resources, residents' purchasing power and consuming willingness.

China was in the queue of low-income countries defined by the World Bank not only in the early years of reform and opening up, but in most years throughout the 1980s and 1990s. According to World Bank statistics, when China ended 10 years turmoil of “cultural revolution”, its GDP per capita, according to constant price of 2000, was only \$149 in 1977, \$771 in 1997, and didn't break through \$1,000 mark until 2001. According to World Bank's dividing standard in 1998, per capita \$760 is the demarcation point between low-income countries and below-average income countries, and according to dividing standard in 2000, \$996 is the demarcation point.

By constriction of lower consumption level due to lower residents' income level, residents' final consumption demand is obviously not sufficient to support economic growth rate of 8 % or above for a long time. Therefore, economic growth is highly dependent on investment demand and export demand. From this perspective, large-scale and fast-growing exportations of manufacturing products not only help to realize the comparative advantage of labor abundance and cash dividend, but also delay the phenomenon of decreasing returns to capital, making investment-driven economic growth continue for a long time, at the same time creating unprecedented external demand.

We can see later that from the reform and opening up to present, except for some extreme years, the contribution of final consumption always remains at 3–5 percentage point in demand factors driving economic growth, while the performances of GDP average annual growth rate approaching 10 % in each year depends on the performances of investment demand and export demand, as well as growth and decline of their relative strength. After China's accession into the WTO in 2001, the volatility range of consumption demand's contribution rate has decreased obviously.

Although looking from the statistics, during the period from 2001 to 2011, net exports of goods and services' pulling effects on economic growth are not large, only 0.56 % a year according to arithmetic average value. However, this estimation

based on GDP, reflects only export's proportion in added value. If measured by traditional trade dependency, export's contribution to China's economy is undoubtedly bigger, which can reflect export's positive stimulating effects on economic activities and further on employment. In fact, economic activities can also be measured from factors of production's input, such as the scale of labor input or opportunities of employment.

Through the observation of manufacturing industry's export proportion and export-related employment proportion, we can see the later is more dependent on demand factors in international market from the perspective of employment. For example, in 2004, export's proportion was 23.9 % in manufacturing industry's overall sales, while labor working for export accounts for 26.4 % in manufacturing industry's overall employment. In 2008, these two corresponding proportions are respectively 18.9 % and 22.3 %. Besides, in export-oriented enterprises of coastal areas such as the Pearl River Delta Region, due to their extensive use of mobile migrant workers and service dispatching workers, many workers in reality have not been reflected in staff statistics, thus the actual employment figure is seriously under-reported. If taking these factors into account, China's economic dependency on export demand measured by employment will be undoubtedly higher.

It is also clearly seen from the improvement of Chinese export goods' share in the world that globalization makes other countries' import demand become demand-driving factors of China's economic growth. As Fig. 4.2 shows, Chinese products' exports accounted for only less than 1 % in world trade of manufactured goods in the early 1980s, increased to 5 % after China's accession into the WTO in 2001, and was more than 15 % by 2011. We can also see from the figure that, import growth of Chinese manufactured good was relatively slower during the same period.

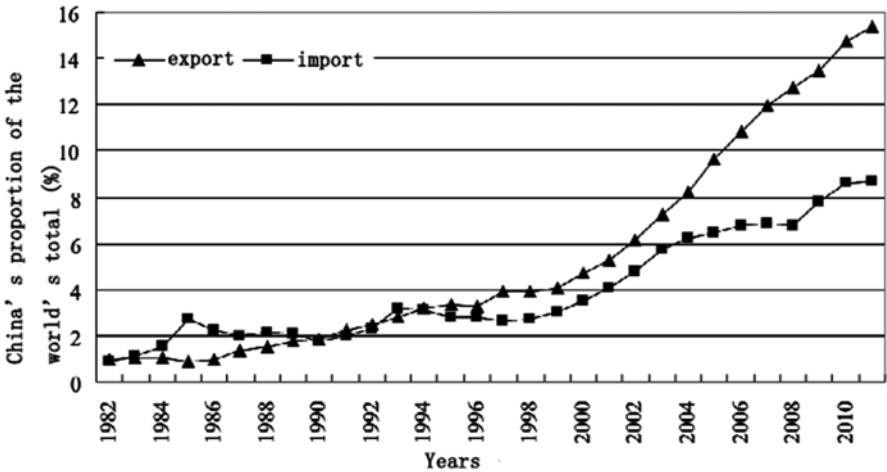


Fig. 4.2 Chinese trade's proportion of the world's total (Source from: [http://stat.wto.org/StatisticalProgram/WSDBViewData.aspx? Language=E](http://stat.wto.org/StatisticalProgram/WSDBViewData.aspx?Language=E))

Therefore, if measured by net exports' proportion among the world as a whole, this indicator's growing speed was faster.

We can say that, since China's reform and opening up, especially after its accession to the WTO, China has been called the factory of the world or the world manufacturing center. This just reflects factors of foreign demand have played an important and indispensable role in breaking demand "bottleneck" of economic growth. Not only that, the development of export-oriented manufacturing industry has also pulled the developments of energy, raw materials, construction, services and infrastructure through industry agglomeration and externality effect, as well as location factors. Besides, as employment expands, urban and rural residents' income increases, and the purposes of expanding domestic consumption and continually making it economic growth's main demand factor are eventually realized.

4.5 Effect of Large Economy

In the process of world economic development, while countries usually follow some common laws, showing to us a similar development trajectory, there are also huge differences between different countries, presenting many variety of development road. An important factor leading to different characteristics among countries is the differentiation between the big country economy and the small country economy, among which economic scale is firstly important and meaningful in economic sense. Also, economic scale closely relates with many unique properties which we care for. Total economy and trade, and further total endowment of production reflected in them, both have significant impacts on a country's participation in globalization and international division of labor.

China as a huge economy, once joining the economic globalization as producer and trader, it will inevitably change the traditional theory of comparative advantage. If we do not understand this, it will be difficult to understand why economists cannot be consistent between theory and policy suggestions, nor understand why China faces so many criticisms and becomes the target number one of trade protectionism.

Winner of Nobel Prize in Economics, Paul Samuelson has always been dedicated to promoting the Ricardo's theory of comparative advantage, alleging it to be a correct and important theory second to none in social science. Another American winner Paul Krugman even declares that if there must be some creeds for economists, the following oaths must be included, which are "I believe in the principle of comparative advantage" and "I believe in free trade". However, when their country – the United States is no longer the absolute beneficiary of globalization, their claims on policy are obviously inconsistent with their theories.

A new situation noticed by Samuelson is that productivity improvement makes China's comparative advantage no longer be limited to the original export industry, while this comparative advantage with dynamic changes transfers into a strong competitor of America's related industries, therefore in fact, free trade will not

make the United States and China benefit equally from it. Obviously, whether as a U.S. leading economist, or as a centenarian familiar with growth and decline of countries and regions led by comparative advantage shifts in history, Samuelson will not easily give up the theory of comparative advantage, nor recommend protectionist policies of any forms.

However, Samuelson has no alternative but admit that since the beneficiaries of globalization within a country will not automatically make necessary compensations for the damaged, American workers whose jobs are replaced by Chinese competitors have undoubtedly paid the prices for globalization. Another Winner of Nobel Prize in Economics, Michael Spence, draws a startling conclusion from experience studies of American employment changes, which is industry outsourcing has destroyed American economy. U.S. economist Paul Romer admits that free trade can fundamentally reduce inequalities among countries. However, what tangles him a lot is that sympathy for the disadvantaged people in the world is a good thing, while unfortunately inequality within the United States is rising constantly.

Facing conflicts between national interests and the principles of economics, Krugman, who has paid constant attentions on income inequalities in the United States for a long time and always been famous for being outspoken, has claimed without scruple that China's huge trade surplus is the result of official manipulation of RMB exchange rate rather than completely the result of comparative advantage. This understanding leads him to come up with policy proposals beyond the bottom line of science, and even suggest the U.S. government take punitive measures against China.

Blaming other countries' policy distortions for dynamic comparative advantage changes and national competitiveness decline and taking arbitrary interventions and punitive policies are nothing new. I was on a business trip to New York in 2010, and was set to stay at the Plaza Hotel. I didn't stop feeling that I had heard of this hotel until suddenly reminding that a remarkable historical event happened here, which was the signing of "Plaza Accord". On September 22, 1985, in order to get rid of the dilemma of trade and finance "Double Deficits", the United States, along with France and the United Kingdom, forced Japan and former Federal Republic of Germany agree to appreciate their currencies substantially.

Principle of comparative advantage has never changed, however, an important factor unable to neglect is the so-called effect of large economy, which relates to China's status in world economy. The traditional comparative advantage theory assumes two countries, two products and two kinds of production factors, demonstrating that all countries can be benefited through trade. However, since China's economy is a leviathan, once it involves in international division of labor, its own factors of production such as labor force and manufactured products have scale large enough to submerge some smaller economies on one hand and lead to some big powers' industries decline rapidly on the other hand in international trade of certain products.

It is true that China also import products from other countries with the same overwhelming scale, such as its strong demand for machinery and equipment from

developed countries and minerals from resource-rich countries. However, due to many factors including political prejudices, the situation that each country can equally benefit from international division of labor is no longer an unalterable principle. Even so, it is not China that should be blamed, and the responsibility to solve the big problem of world economic imbalance can not be taken up by China alone.

First, developed countries especially the United States' strict restrictions on exports to China has made the latter unable to play the role as the world's biggest importer at the time when it has become world's biggest manufacturer and exporter of labor-intensive products. The United States is a country with a long tradition of trade protection, whose export restrictions on high-tech products has always been an important part of its trade policy. America's strict restriction on exports of high-tech products to China have lasted since the establishment of the People's Republic of China, gone through the cold war till today. After China's accession to the WTO, Sino-U.S. trade has significantly increased in scale. At the same time, the United States continues to implement export restrictions on China in the name of national security, causing a huge trade imbalance between these two countries. China and the United States are at different stages of development in science and technology, and the latter's more and more restrictions on Chinese exports of high-tech products obviously deviate from the principle of comparative advantage, therefore, the United States' trade deficit with China is made by itself.

Second, a country's competitiveness is ultimately the result of this country's technology progress and productivity improvement. Inhibiting trade partners' economic development environment and hindering them to play the role of dynamic comparative advantage are nothing helpful for solving its own problems. American economist Robert Gordon lists a number of factors which slow down America's economic growth at present and in the future from innovation and the trend of its diminishing effects on promoting economic growth. Respectively, these factors are disappearance of demographic dividend, wandering of education development, worsening of inequalities, interactions between globalization and information technology, energy and environment, family and government debt, and etc. It is obvious that blaming trade rivals for economic growth wandering mainly caused by domestic factors, even for transferring people's attentions to politics, will often lead to futilities in policy.

Third, the United States is the absolute beneficiary of globalization after all. However, wrong tendency of domestic economics and social policies lead to a large number of workers lacking skills for employment, and the country goes further and further along the road of unequal distribution of incomes. Blaming industry transfer and competitions brought by outsourcing to hide domestic policy mistake will not be an effective cure for their system's ills. Yet Krugman sees the crux of the problem in this regard. He reviews the relationship between Democrats and Republicans' different policy tendencies for income distribution and the actual inequality degrees in the process of the two parties' alternation in power, and comes to the conclusion that the expansion of income gap is closely related with the adoption of what kind of domestic income distribution policy.

4.6 “Goose” or “Dragon”

Besides defining the differentiation between big country economy and small country economy from economies' scale, we can also look at it from another perspective. The core characteristics of small country economy lie in homogeneity of resources endowment structure and then industrial structure. Since there exists no production factors' flowing obstacles in system, therefore there is no constant differences between regions' resources endowment structure, or that these differences soon disappear in the process of development. As a result, national economy as a whole obtains comparative advantages on one or some industries owing to relative abundance or scarcity of its factors of production. Once comparative advantage changes, economy will enter a new stage of development as a whole.

Big country economy's characteristic is the heterogeneity between different regions. Influenced by institutional factors, the flow of factors of production encounters obstacles of the system, namely there exist huge differences of resource endowment structure between regions, and convergence of economic growth can not be formed for a long time. Therefore, when some regions enter into new stages of development, their endowment structures of factors of production change correspondently, thus comparative advantages and industrial structures change. At the same time, other regions may still remain in their original development stages, with no appearances of corresponding structural changes.

Big country economy and small country economy differentiated by regional homogeneity or heterogeneity have quite different performances in long-term economic development. Especially in the key stage of economic development's turning point, economic performances of these two present huge differences in characteristics. According to this definition, China is the most typical big country economy. Besides that her total economy is the second largest in the world, the characteristic fitting most the definition above is huge differences between regions in aspects as resources endowment, relatively scarcity of factors of production, relative prices, economic development levels and etc. owing that unified national market for factors of production has not been formed for a long time.

Observing China's big economy effect in this sense, regional characteristics reflected in the process of its economic development also show its prominent uniqueness through the period of regional economic development stage shifts. That is to say, when factors of production's endowment structure change, thus comparative advantage change in economic developed areas, changes in relatively backward areas are not significant, even haven't happened yet.

Recognizing and fully understanding Chinese economy's big-power effect as a leviathan is helpful to determine where Chinese manufacturing industry should go, or we can say how global manufacturing industry center transfers its direction after economic development stage reaches a key turning point, namely after China's demographic dividend disappears and labor cost rises.

This special regional effect of China demonstrates that although economic growth theory has summarized many economic principles and revealed many laws,

yet every country has its own special national condition, thus can more or less be an exception of economic models. This point can be fully illustrated by comparing this big-power effect of China with the small-power effect of Singapore.

U.S. economist, Paul Krugman once criticized the East Asian model using the example of Singapore. He thought Singapore's experience showed that this country's high-speed economic development mainly depended on input of factors of production rather than supported by improvement of productivity. Therefore, he predicted that Singapore's economic growth could not be sustainable. Many years after he made this unconfirmed prophecy, he was introduced to Prime Minister of Singapore Lee Kuan Yew at an international conference. Prime Minister Lee Kuan Yew always remembered Krugman's criticism in his heart and he said to the latter: You think what we have are all accumulations of factors of production, which can not be supported without technological progress. Then, I ask you a question, Singapore's saving rate has been nearly 50 % for the past 40 years, which can be counted as the highest in the world, but our return on capital has not decreased. If there is no technological progress, how can this happen?²

If this dialogue between these two persons really happened rather than made up, I want to clap for the question of Prime Minister Lee Kuan Yew. Krugman was wrong about East Asian Model, since he took hypothesis of the neo-classical growth theory as an unalterable principle, not knowing the demographic dividend and not willing to admit the existence of a development stage as dual economy. On this point, we will explain in later chapters. Here what I want to say is Prime Minister Lee Kuan Yew's saying is not accurate either.

First of all, Lee Kuan Yew mixed marginal return rate on capital with the return rate on investors. Diminishing return on capital refers to capital in the general analysis of economic growth or in a specific econometric analysis, which will decrease with the increase of investment. For economies with technological progress and productivity improvement, capital contribution of economic growth is replaced by corresponding improvement of total factor productivity, so that economic growth can be sustained. At this time, investment on economic process is still profitable. What Lee Kuan Yew said “return on capital has not decreased” actually referred to the latter. As Singapore becomes a more mature economy, the phenomenon of diminishing returns on capital in the former sense will happen inevitably, which is also in conformity with neoclassical growth theory's expectations without exception.

Second, Singapore has a special condition, which Lee Kuan Yew had not mentioned to Krugman. It was also not necessary to do so since Krugman did not understand the meaning. That is, due to a large number of Singapore's introduction of foreign labor force, the arrival of Lewis turning point was delayed, thus the harvest time of demographic dividend was extended. In East Asian economies, many countries and regions have used foreign workers to keep labor supply and delay the Lewis turning point, so that some researchers take international or regional rather

²The story was quoted from Yifu Lin's speech, see also Lin's “Talk about Economy” on *Discussion Memoir* edited by Shanghai Development Research Foundation, 2013, (36), p. 33.

than a country's labor shortage as the sign of Lewis turning point's arrival. However, Singapore is an exception of using foreign workers all the time, so that about 40 % of this country's GDP has been created by foreign workers till today. More or less yet no doubt, this is an important reason for Singapore's more plenty labor supply and then diminishing returns on capital's delay.

For a small-power economy like Singapore, the practice of depending on foreign migration labor in great scale to keep labor supply is feasible. However, for big-power economy like China, this is not realistic. Imagine that China imports labor forces from 20 to 29 years old from other developing countries, thus to increase total employment population by 40 % in 2010, rough calculation indicates that China's total demand will account for nearly 40 % of all other developing countries' population of that age. However, as a big-power economy, China has its own unique advantages, which can carry forward the endowment of labor abundance like Singapore. That is, forming a domestic version of Flying Geese Model to benefit from globalization continuously.

Seen from the surface, the emergence of "labor shortage" phenomenon caused by demographic dividend's disappearance, as well as unskilled workers' rapid wage rise, seem to indicate labor-intensive industries' comparative advantage has come to an end in China. That is to say, under the condition that labor costs increase continuously, by following the experiences of Flying Geese Model which has happened before, it seems logical that Chinese labor-intensive industries are transferring to other countries.

In fact, this conclusion is not necessarily logical, and it is not accurate either. At least in 10–20 years, the potentiality of resource reallocation efficiency will still exist, which is mainly reflected in labor-intensive industries' transfers among different areas. In other words, as a big-power economy, China is not a lonely leading goose, but a huge dragon which body can stretch long. We can see at least two factors, which will strongly support the "Flying Dragon Model" of industries transferring in different domestic regions.

The first factor which helps industries transfer among regions is that we still haven't seen a country or a region of countries that has enough size or strength to replace China's status as a manufacturing power. There were investors transferring their investment to India, Vietnam, and other such countries since wages increased in coastal areas of China. Once some journalists saw this, they followed these investors to the new investment areas and made interviews. Finally, they were surprised to find that common workers' wages in these countries were also increasing, which was very consistent with the time of wage increase in China, so was the amount of increase.

Actually, it is not strange. Since China's cheap labor force can inhibit wage increase worldwide in the past 20 years to 30 years, China's significant wage rise at present can naturally drive wage increases of other countries, especially those follow China and wait for harvesting demographic dividend.

As a kind of strategic thinking for investment, Goldman Sachs has once created the concept of "BRIC", then "Next 11", which has economic growth potentiality and are related with demographic dividend. These countries are South Korea,

Indonesia, Mexico, Pakistan, the Philippines, Bangladesh, Nigeria, Iran, Vietnam, Turkey and Egypt. Since South Korea is a high-income country, whose demographic transition process is similar with China, actually it should not be put in this group. However, India, which was not included in the “Next 11”, is instead more conform to the standard of being able to compete with China in labor supply potentiality and wage level, therefore, we replace South Korea with India into comparison with China. Potential manufacturing undertaken countries are undoubtedly far beyond these countries above, yet here we only take them as examples. The reason we want to explain will have general meanings.

Some of these countries above undoubtedly have advantages over China in labor costs. For example, in countries such as India, Vietnam and Bangladesh, per capita GDP and wages are significantly lower than in China. However, per capita GDP of Turkey and Mexico are much higher than that of China, so are their salaries, therefore they have not formed great competitiveness from the perspective of labor cost. One important fact which needs our attention is that China is a big country in population and labor, whose status can not be replaced by all these countries above adding up together.

For example, among the total population of working age from 15 to 64 years old of all the 12 countries in comparison in 2010, China took the absolute majority of 38 %. If the world’s second most populous country India was excluded, China’s proportion among all working-age population reached up to 55 %. Even by 2020, the proportion of China’s working-age population will still be higher than that of many other countries.

The large size and proportion of dominant advantage of China’s labor force determine that these countries’ possibility of replacing China to become the world manufacturing center is very little, at least for the moment. In other words, even a smaller proportion of China’s labor-intensive industries transfer to a certain country or countries, it can cause the strong increase of related countries’ labor demand, resulting in insufficient labor supply, and then reducing their competitiveness because of rising wages.

It has been found in recent years that the trend of labor shortage and wage increase is very obvious in countries trying to undertake China’s labor-intensive industries. Here we take India as an example. Although both its population size and working age population size are very large, average years of education of population over 25 years old in this country are only 4.4 in 2010 due to their low education levels. Since many of them can not meet the requirements of their jobs, India’s effective labor supply is actually not sufficient. This may explain why according to some standards, wage inflation in India has been the top one among Asian countries for 10 years.

It is clearly seen that observing labor supply not only depends on its absolute quantity and relative quantity, but also on whether the skills of workers can meet their job requirements or not. In other words, labor quantity and human capital decide the end-result of manufacturing industry together. Let’s look at average years of education of population over 25 years old. Among the 11 countries in comparison with China, only Mexico and the Philippines’ years of education are about 13–14

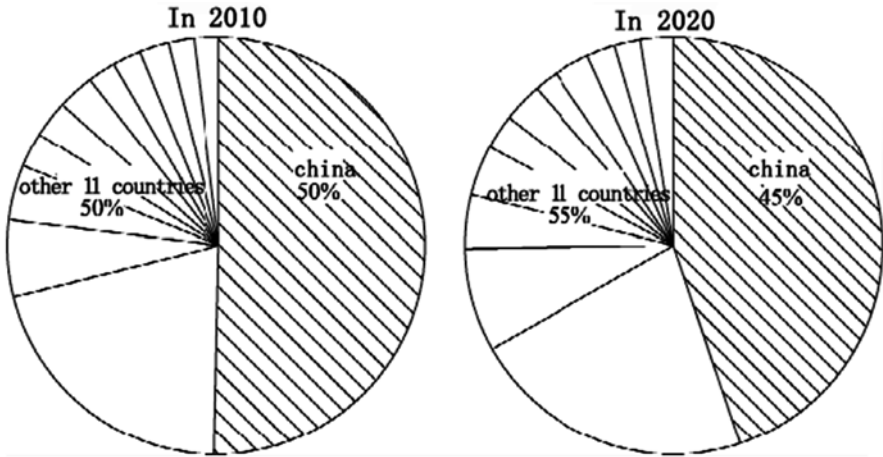


Fig. 4.3 China and other competitive countries' share of total human resources (Source from: Calculation according to the United Nations Data)

months higher than China. And more countries' per capita years of education are much lower than China, such as that of Bangladesh is 33 months lower than that of China. If we calculate the product of total population over 25 years old and per capita years of education as the amount of a nation's human capital, then China accounted for more than 50 % in 2010 among the 12 countries (Fig. 4.3).

Forecasting based on the above countries' average years of education growth rate during the period from 2000 to 2010, average years of education of China's population over 25 years old in 2020 will reach 8.63, when China's total human capital still accounts for 45 % of all these 12 countries. This forecast has two meanings.

First, at least until 2020, China's total human capital will still have huge advantage. Some of labor-intensive manufacturing industries will be transferred to other developing countries, however, China's status as manufacturer of these products can not be completely replaced, even it can not be replaced to a large extent.

Second, the key of China keeping the status as a manufacturing superpower is the speed and quality of human capital accumulation and education development. Demographic transition is an irreversible process. The first demographic dividend will finally disappear, but labor force quality can be increased, while the second demographic dividend can be unlimited.

The second factor which helps industries transfer among regions is we can expect that wages in central and western regions will continue to be lower than in the eastern region within a certain period of time. With the emergence of shortage of migrant workers and the creation of more employment opportunities through central and western regions' development, migrant workers' wages tend to be convergent among eastern, central and western regions. In 2003, migrant worker average wage in central and western regions was only equivalent to 74 % of that in eastern region, and this proportion increased to 96 % in 2009.

However, we can still expect that the speed of wage increase in coastal areas will be gradually faster than in the Midwest, since from the perspective of current total number and incidence of labor dispute cases, the eastern region accounts for an overwhelming majority. For example, 72 % of the country's labor disputes on file occur in the eastern region. Incidence of these regional labor disputes, namely 1,000 workers correspond to 5.2 labor dispute cases, is much higher than those of the central and western regions, which are 1.5 and 2.0 respectively. Since labor dispute's main controversial content is wage, which means current wage level in the eastern region is more unsatisfied for workers, continued quick wage rise can be expected in order to attract workers.

By contrast, current wage level in central and western regions is still attractive to local workers, especially to older rural workers. As a result, if they are mobilized to non-farm employment, probably their wage increase is relatively stable. Therefore, we can see the huge space for labor-intensive industries to transfer to the central and western regions from the perspective of regional wage gap and potential labor supply.

Industries' regional allocation is not only decided by factor cost, but also closely related with the aggregation effect which affects enterprise production cost and transaction cost. Using data of China's manufacturing enterprises above the designated size from 1998 to 2008, (namely, prime operating revenue more than five million Yuan), as well as research findings of fiscal and tax data by counties,³ the effect of industry agglomeration dominated labor-intensive industries' regional allocation before 2004, leading to more concentration of the latter in the eastern region. After that, this effect declined gradually, while increases of enterprise comprehensive management costs and factor cost gradually become important factors which affect industry allocation.

Therefore, since 2004, labor-intensive industries' transfer from the eastern region to the central and western regions (mainly to the central region) began. For example, eastern region's proportion of output value among labor-intensive manufacturing industries' nationwide dropped from highest level of 88.9 % in 2004 to 84.7 % in 2008, falling more than 1 percentage point every year. Due to the limitation of data availability, we can only see the changes in only 4 years, but in fact it can be expected that after 2008, this industry transfer speed will not only continue, but also accelerate greatly.

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³Qu Yue et al. (2012).

Chapter 5

Development Stages and Turning Point

There exist closely related connections between economic cycle and economic growth process. They not only exert important influences on each other, but also are determined by different factors respectively. Therefore, if we want to understand Chinese economy, we need to combine short-term perspectives with long-term one. Only by doing so, can we make the right judgments on economic development stages and macroeconomic situation, and form targeted responding train of thoughts and policy measures.

Fundamental changes have taken place in China's economic development stages. Not only the Lewis turning point was stepped over, but also demographic dividend began to disappear rapidly, which would eventually present as decreased potential output capacity on the supply side. If this can not be realized from long-term aspect, judgment on short-term macroeconomic situation will also be an inevitable mistake. If we think that growth slowdown is caused by cyclical factors, thus adopt policies to stimulate growth from the perspective of demand, it will undoubtedly produce the opposite effect. We can see from international experiences that such policy failures often lead to disastrous consequences.

5.1 Economic Development Stages

Many early development economists have a common characteristic. They were keen to divide economic development into different stages. According to the logics of this theory tradition, latter countries tend to follow the paths and corresponding laws former countries have experienced. It is for this reason that comparative study on economic development becomes meaningful. Among the division of economic development stages, the most famous is Rostow's Five Stages of Economic Development Theory, namely a country becoming rich from being poor needs to experience five stages of development, which are respectively stage of traditional society, preparation for take-off, take-off, becoming mature and mass consumption.

However, opinions have been various on the division of development stages from the day it was born, and it has caused fierce debates among scholars. Besides, with development economics gradually retiring to mountains after the 1970s, neoclassical growth theory has occupied the mainstream status correspondingly. Economic development is no longer divided into stages, which seems to have only one type from beginning to end, known as the neoclassical growth. According to Solow's analysis, in growth of this kind, labor force is lacking, continual capital investment will be impeded by diminishing returns, and as a result, the only sources of long-term economic growth are technological progress and productivity improvement.

In fact, such an explanation can not satisfy economists, because no one can deny that Malthusian poverty trap has been dominant for the longest time in human history, and this equilibrium trap characterized by the cycle of poverty and hunger has completely nothing in common with Solow's neoclassical economic growth. Therefore, sooner or later some economists will come forward to admit that before the status of Solow's neoclassical growth, there indeed existed a status of Malthusian equilibrium, and they have tried to analyze these two using a unified theoretical framework.

It is Prescott and his author who have made this contribution, namely admitting Malthusian stage in mainstream economic analysis, and actually returning to the division of economic development stages.¹ Not only that, in an article of this winner of Nobel Prize in Economics with another co-worker, he further acknowledged that, in fact, there existed a transition stage from "Malthus" to "Solow", and the key of this transition was how to eliminate impediments constraining labor mobility.²

We can imagine without spending a lot of efforts that this economic development stage from "Malthus" to "Solow" should be called "Lewis" stage. Naturally we know that this stage is also known as dual economic development stage, which is characterized by agricultural labor force surplus being absorbed by constant subsistence wages of modern sector's growth until the new phenomena of labor shortage and constant wage increase appear, namely, the arrival of Lewis turning point.

It is generally believed that the intellectual property rights of modern economics, including growth theory should belong to western economists. However, in the history of western economics, thousands of years' transition from Malthus Era to Solow Era was slow as a snail, while demographic transition process was unable to show changes of periodic significances, therefore it was hard to see clearly the Lewis Era between them. As a result, the process of dual economic development is often ignored by western economics, and Lewis's correct observation is thought to be an only peculiar phenomenon in developing countries, even when people of insight in later mainstream economic circles have observed similar phenomena, they are still unwilling to make appropriate expressions straightforwardly.

For example, Prescott and his co-workers we have mentioned have never named this transitional stage being observed, instead, they only pointed it out. Masahiko Aoki, who has made deeper observations based on East Asian experiences, also

¹Hansen and Prescott (2002).

²Hayashi and Prescott (2008).

refused to call it Lewis stage, yet he called it Kuznets stage. Obviously, he didn't want to emphasize the transfer of labor surplus, while he was more willing to put his focus on changes of economic structure.³

However, no economists can deny the existence of dual economic development process once becoming long-term observers for China's economic development. This is because during the whole period of reform and opening up, Chinese economic development has been accompanied by massive labor transfer from country to city all the time, and Chinese economy's high speed is just realized by removing institutional obstacles to condense this rich and cheap labor factor into labor-intensive products, thus turning it into comparative advantage in international market through participation in global division of labor.

Not only that, understandings of Chinese economy can only be shallow if we don't understand Lewis' theory and the development states it has described. The existence and transfer of a large number of labor surplus not only affect economic development process in the long-term as well as in the short-term, endowing it with Chinese characteristics, also, the decline and eventual disappearance of this labor surplus lead to changes of economic development stages, determining Chinese economic growth's future pattern.

An important Chinese phenomenon parallel and closely related with this is rapid demographic transition, presenting as constant opening of demographic window of opportunity and its closing down gradually afterwards. When debating whether Lewis turning point has come or not, researchers with negative views are reluctant to admit the arrival of this turning point even when they have seen the phenomena of labor shortage and wage increase, since the most difficult for them to convince themselves is why China's this turning point came so early.

Indeed, the fast speed of China's demographic transition is unprecedented, so that people have summarized a general statement, known as "getting old before getting rich". Therefore, breaking people's mindset needs to theoretically put demographic transition into Lewis framework, which means building an extended theoretical model of dual economy, and experientially make observations on demographic dividend China has gained in the process of economic growth jointly with the transfer of agricultural labor force.

Lewis himself probably didn't notice the demographic transition theory which had already appeared in his era, but he still took demographic transition in "high birthrate, low mortality, high growth rate" stage as an implicated premise of the dual economy existing in developing countries. Starting from here, the only concerns left for Lewis are just modern sectors' expansion and their absorption of labor surplus, while demographic transition's turning into next "low birth rate, low mortality, low growth rate" stage needs not to be taken into consideration.

Once we take these two factors into account: economic growth absorbs labor surplus and demographic transition reduces labor supply, China's exceptional performances in economic growth and demographic transition leading to the rapid arrival of Lewis turning point is completely logical and can be expected.

³Masahiko Aoki (2012).



Fig. 5.1 Total fertility rate during the people's Republic of China period (Source from: calculated according to China Population Information Research Center's database before 1998; calculated according to all previous population sampling survey data after 1998)

As shown in Fig. 5.1, fertility rate in China began to drop down quickly since the 1970s, then in the 1980s, fertility rate's decrease was accompanied by the development of dual economy initiated by reform and opening-up. By the early 1990s, total fertility rate dropped below the replacement level of 2.1. Since the start of twenty-first century, fertility rate has basically stabilized at 1.4. Long period of low birth rate level undoubtedly has intrinsic logical relations with the arrival of Lewis turning point and the disappearance of demographic dividend.

Until now, we can see according to acknowledged theoretical frameworks that, at least at the beginning reform and opening up, along with China's achievements of large-scale poverty alleviation, it had got rid of the Malthusian trap and entered the period of dual economic development, having realized unprecedented and remarkable growth performances. Accompanied by the arrivals of Lewis turning point and the turning point of demographic dividend's disappearance, the fundamental changes Chinese economic development stage faces are essentially transition from dual economic development to neoclassical growth.

Whether the right judgment on China's economic development phase can be made or not, as well as whether the nature of challenges Chinese economy is facing can be realized or not determines whether the miracle of Chinese economic growth could sustain for a long time. If the theoretical framework which combines the long-term period with short-term is lacking, we are likely to draw a plausible judgment and produce mistaken policy conclusions when facing such a transition without previous experiences to reference to. But unfortunately, this is precisely the current status of academy circles and policy circles of Chinese economy.

5.2 Turning Point of Chinese Economy

When positioning for Chinese economic development stage, an analytical method commonly used is comparing China with some countries which has experienced a similar development process and now entered the rank of high-income economies. However, comparing current China with which development period of the referencing countries is a rather subtle choice. It is no doubt that naturally researchers can select different development periods as referencing points according to the referencing conclusions they want to get.

For example, comparison between China and other countries on the same development stage seems to indicate the possibility of China's economic growth as a lately-developed country after it has reached the stage of a specific per capita income level, or insinuating which country's road of success or failure China might follow in the future. However, when doing so, inappropriate choice of the time for comparison may cause misunderstanding and misguidance. Therefore, we should avoid subjective randomness and make economic development comparisons according to the internal logics of things as possible.

To compare China with Japan is a very meaningful research subject which also needs to be exceptionally careful. Like China, Japan was once regarded as a miracle maker having successfully realized economic catch-up. Also, Japan's development path also has many similarities with China, including both countries have benefited from demographic dividend created by demographic transition, while governments have played a more prominent and direct roles in the process of economic development. More importantly, however, China and Japan both have undergone the Lewis turning point from infinite supply to shortage of labor, as well as the turning point of demographic dividend's disappearance.

Some researches tend to compare China's current development stage with Japan in the 1950s and 1960s. The significance is Japan's economy in this period, such as the turn of per capita income level as well as the turn of labor excess to shortage, is quite comparable to China. However, this comparison loses two most meaningful pieces of information.

First, comparing China with Japan in the 1950s and 1960s, since their per capita income levels are closer, we can undoubtedly conclude that, according to the experience of Japan, China still has 20 years or even longer period of rapid growth. This conclusion helps people to understand the possibility of China's economic growth, while this reasoning cannot answer the essential question of whether China can avoid the middle income trap or not. In fact, comparing with economies successfully crossing the middle-income stage and entering into high-income rank, more countries began to stagnate just on the stage where growing possibility still exists, or even fell into the middle income trap. Therefore, identifying the source which determines the sustainment of growth is more relevant for China than just pointing out the possibility of maintaining growth.

Second, it is generally believed that Japanese economy reached the Lewis turning point of labor shortage and wage increase in 1960, however, the turning point of

demographic dividend's disappearance marked by working age population stops growing and population dependency ratio began to rise did not appear until the early 1990s. In terms of the interval between these two turning points, China's characteristic of "getting old before getting rich" has a different performance, namely after arriving at the Lewis turning point in 2004, it only spent a few years to have stopped the growth of the working-age population from 15 to 64 years old in 2013. If starting from China's national conditions and selecting population aged from 15 to 59 as the working-age population, it has already started a significant declining process since its peak in 2010.

It is clear that comparing China in 2010 with Japan in 1990 is more conforming to the common challenges faced by both economies, so is to of comparative studies' original purposes. It was just in 1990 that Japan's economic bubble burst and its economic growth fell into more than 20 years of stagnation since then. For example, during the period from 1990 to 2010, Japanese GDP's average annual growth rate was only 0.85 %. Observing the changes Japan encountered which was similar to today's China, as well as their relation with Japanese economy's "20 years lost" will help us to understand the severe challenges China is facing, from which useful policy implications can be derived.

In a typical dual economy's development, since labor supply is almost unlimited, labor needed by economic growth which is constrained by industrial accumulation ability can be provided on the level of constant subsistence wage. As a result, industrialization in this period is accompanied by massive labor transfer from country to city all the time. In terms of this process, China and Japan have big differences in several aspects.

First of all, China's labor flow is always facing greater institutional obstacles. Under the strict confinements of people's communes systems, unified purchase and sale system and household registration system before the reform and opening up, transfer process of China's rural labor surplus was delayed for decades. Even after that, when the scale and scope of labor flow have expanded, they are still restricted by the household registration system at the same time. Therefore, labor transfer is not complete, which still belongs to the "come and go" mode, while transferred labors and their families have failed to become permanent urban residents.

Second, during the whole period of reform and opening up, China is in the process of rapid demographic transition. The speed of this process is much faster than any other country has previously experienced, thus forming its unique characteristic of "getting old before getting rich". Therefore, different from Japan's 30 long years of interval between Lewis turning point and its demographic dividend's disappearance, China quickly encountered its turning point for demographic dividend's disappearance after the Lewis turning point showed up.

When debating whether China has reached its Lewis turning point or not, since economic development stages have long-term characteristics and their changes are reflected in a certain time period, some people suggest replacing Lewis turning point with the concept of "Lewis turning period".⁴ Given China's vast territory and

⁴Garnaut (2012).

unbalanced economic development between regions, this suggestion is undoubtedly reasonable.

However, when constructing such a “period” which helps to recognize problems, we should also pay attention to two things. The first is to prevent this period from being infinitely extended so that losing this turning’s original meaning and intrinsic prescriptiveness. The second is to ensure that its structure has observable nature in experience, so that actual comparisons and judgments can be conducted.

If according to the concept of dual economic theory itself, the process from Lewis turning point’s appearance, when labor shortage and wages increase show up, to commercialization point’s appearance, when labor’s marginal productivities of agricultural and non-agricultural industries become equal, can be regarded as Lewis turning period. However, mainly due to the condition that labor’s marginal productivities are equivalent has the nature of being difficult to grasp empirically we believe, based on the experiences of East Asian economies, the interval between Lewis turning point and demographic dividend’s disappearance is an turning period that is much easier to observe and, also has more policy implications. Seen from China’s experience, the two turning points above, namely the Lewis turning point and the turning point of demographic dividend’s disappearance have both showed up, thus taking the interval between these two as Lewis turning period can demonstrate more profoundly its policy implications.

Figure 5.2 shows the whole process of Chinese working age population from 15 to 59 years old starting from rapid growth to slow growth, then to zero growth, and finally to negative growth. It is generally that with working age population’s this change, the process of dependency ratio of population starting from falling fast to slowing down, and then to rising after reaching the lowest point also happens at the same time. Therefore, here we take the change of working age population as the

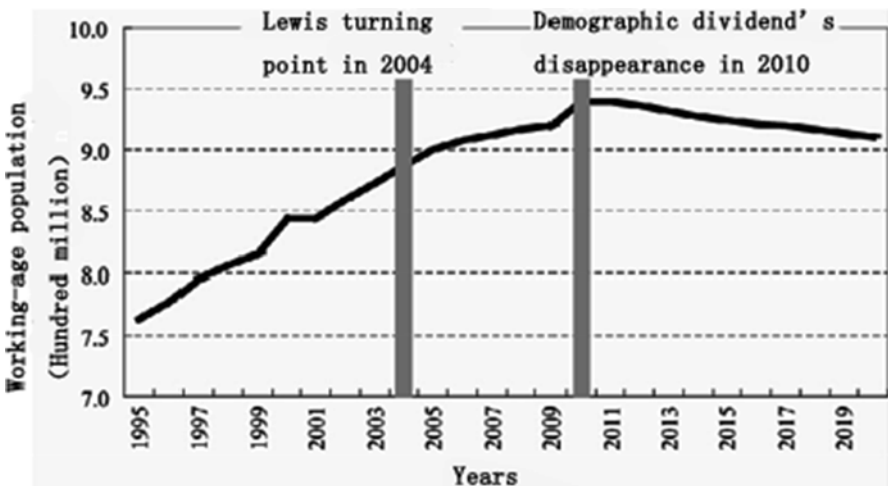


Fig. 5.2 China’s Lewis turning period (Source from: China Development Research Foundation (2012))

representative of these two processes. As shown in Fig. 5.2, we subjectively mark the year 2004 as Lewis turning point and the year 2010 as the turning point of demographic dividend's disappearance, and the years between these two is the Lewis turning period. It is however not necessarily accurate to say this classification is subjective; in fact, it is the product of combining theory with experience.

According to the theory of dual economy, when labor demand grows faster than supply, so that typical phenomenon of constant wage in the dual economic development period no longer exists, the first Lewis turning point is coming. In 2004, China reached the Lewis turning point with shortage of migrant workers and then continuous wage increase as empirical evidences. In 2010, working age population reached the peak, and then began its negative growth after that, while correspondingly, dependency ratio of population began to increase after reaching the bottom, meaning that demographic dividend formally run out. Since China was influenced by the characteristics of "getting old before getting rich", its Lewis turning period was very short, only lasting for 6 years.

If using the same conceptual framework to observe Japan's economy, its Lewis turning period was undoubtedly from 1960 to 1990. During this period, the Japanese economy maintained rapid growth for 30 years, but once it crossed this time point, Japan's economic growth came to an end abruptly without inertia.

Seen from the surface, Japan has gone through the bubble economy in the 1980s, unable to revive after this bubble burst. However, if we can't find other more fundamental factors, it is difficult to convince others that bubble burst will lead to more than 20 years of economic stagnation. Therefore, we should put aside this direct catalyst of bubble burst, and take a look at of what makes a high growth economy came to a halt, and even depressed on that particular stage of economic development. More importantly, we need to understand what lessons China can learn from this.

Once Japan's demographic dividend disappears, it becomes a typical neoclassical economy like all developed countries. At this time, the only source which can support economic growth is total factor productivity which relates to technology innovation and resource allocation efficiency improvement. Whether total factor productivity improvement can be kept to compete with other developed countries is the key to whether Japan's economy can realize optimum growth, which depends on system vitality, innovation ability, level of human capital and a series of other factors.

In these respects, some fundamental obstacles truly exist in Japan. For example, the protection of enterprises without vitality hinders resource reallocation; the artificially suppression of higher education development delays the adaptability of human capital and new development stage. In particular, in the face of potential growth rate's inevitable reduction, the government focuses on stimulating investment through industrial policies and makes macroeconomic policies long-term and normalized, trying to improve economic growth speed in the way of demand-driving, yet the result is even further from expected.

With working-age population aged from 15 to 59 reaching the peak in 2010 and dependency ratio of population dropping to the bottom correspondingly, China faces the turn of development stages similar to Japan in those years, mainly marked

by demographic dividend's disappearance or the Lewis turning period's ending, and then by potential growth rate's decrease.

First of all, labor shortage and wage increase caused by it will significantly and more and more seriously weaken labor-intensive industries' comparative advantages. The most important characteristics of dual economic development are infinite supply of labor and wage stagnating on survival level for a long time. Therefore, the arrival of Lewis turning point means constant wage increase due to the shortage of ordinary workers.

This trend has been widely observed by researchers on Chinese economy. Figure 5.3 shows almost perfectly the complete dynamic state that before 2004, wages of migrant workers wandered at the survival level, and then improved at ever-increasing speed. Ordinary workers' wage increase has played the role of weakening labor-intensive industries' comparative advantages, which is self-evident in theory and can be widely observed in practice. Since the rapid growth in the past 30 years depends on low labor cost, a factor relating with population, the disappearance of demographic dividend will undoubtedly lead to the result inhibiting economic growth.

Second, if we just try to replace labor with machine through increasing investment when facing constant wage increase, the phenomenon of diminishing returns on capital would soon appear. Many observers will think the way of solving the problem of labor cost increase lies in capital's substitution for labor, which becomes reality in real life due to wrong policies. When facing growth's slowing down, government tends to take industrial policies to stimulate growth, including encouragements and subsidies for emerging industries, resulting in the torsion of capital price, which not only directly contributes to the excessive development of capital-intensive

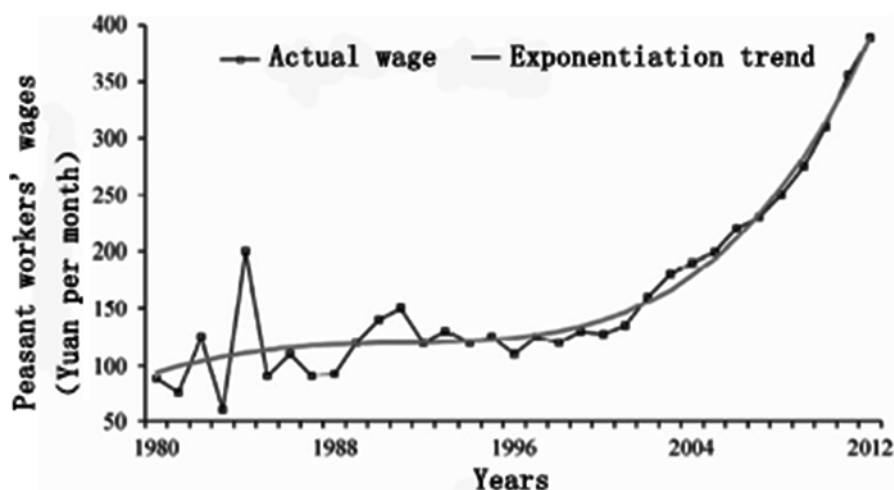


Fig. 5.3 Trend of peasant workers' actual wages changes (Source from: Lu Feng (2011). The original data's closing date is by the year 2010, and the author of this book updates this figure to the year 2012 according to data from National Bureau of Statistics)

industries, but also induces enterprises to replace labor with machines by using cheap capital. However, the characteristic of neoclassical growth is that under the condition of labor not being infinitely supplied, the phenomenon of diminishing returns on capital is inevitable, and growth without the progress of productivity can not be sustained eventually.

Finally, with working-age population in rural areas decreasing, the speed of labor's transferring out from agriculture sectors has decreased, which can also reduce the speed of resource reallocation efficiency's improvement, resulting in slowdown of improvement of total factor productivity. Although the source of improving total factor productivity still exists, the current system constraints, such as the household registration system and the monopoly of state-owned enterprises prevent the free flow of all kinds of factors of production, including labor among enterprises, ownerships, sectors, regions and between urban and rural areas, making it more difficult to further obtain resources reallocation efficiency.

In this case, even with no policy misleading, simply development stage change itself will inevitably mean that China's economy will increase on a lower potential output capacity. Potential growth rate is the normal growth rate which can be realized in the premise that capital and labor are both made full use of, as well as under the supply constraints of certain factors of production and within the limits of total factor productivity's improvement.

In general, economists observe this economic development stage change's influence on economic growth rate through estimating potential GDP growth rate. Mainly because working-age population began its negative growth after 2010, after making necessary assumptions, we estimate that China's potential growth rate will drop down to 7.2 % in the "Twelfth Five-Year Plan" period and to 6.1 % in the "Thirteenth Five-Year Plan" period from the average 10.5 % in the "Eleventh Five-Year Plan" period.⁵

5.3 Understanding the Macroeconomic Situation

In terms of discipline framework, macroeconomics originally includes short-term perspective, namely cycle theory, and long-term perspective, namely growth theory. But in the actual research, these two are not inherently unified, presenting as economists either limit their own study to macroeconomics (narrowly means cycle studies), or to economic growth theory, thus restricting themselves in a corner. In judging economic development stage and understanding economic situation, thus to determine macroeconomic policies and choose development strategies, this tendency often leads to economic analysis insufficient.

Although macro economy will also encounter supply shocks in the short term, such as the influence of oil crisis in the early 1970s on some developed economies, in general, potential growth rate determined by supply factors is stable in the long

⁵Fang Cai and Lu Yang (2013).

term; while demand factors also have long-term trend, it shows characteristics of short-term volatility more often. Based on judging economic development stage accurately, we need to combine characteristics of long-term supply factors shown by development stage change with demand factors in short-term macroeconomics, thus to make a correct evaluation on economic situation, and put forward decisions for targeted regulation direction, object and signal.

Only by the combination of long-term and short-term perspectives, can we have theoretical and practical consistency in judging macroeconomic situation, thus to get correct conclusion and make targeted policy choices. Combining these two closely not only help us judge the macroeconomic situation, but also form the premise of correct policy measures. Long-term supply factors and short-term demand factors construct four macroeconomic situations through different combinations.

The first is the combination of strong supply with strong demand, namely the formation of matched state of higher potential output capacity with stronger level of demand. Generally, this mainly occurs in economic development stage where supply of factors of production is sufficient, productivity has significant room for improvement, and there is no obvious phenomenon of diminishing returns on capital. It is clearly seen that this is a catch-up phenomenon in the process of dual economic development. Under purely this situation, the phenomenon of continuous cyclical unemployment will not appear, neither will serious inflation appear.

The second is the combination of strong supply with weak demand, namely the formation of unmatched state of higher potential output capacity with weaker level of demand. The most typical of this kind is as below: under the condition of economic recession or financial crisis in the process of rapid growth, impacts of cyclical demand make output growth unable to reach the potential level. Usually, this combination causes serious shocks on labor market, resulting in cyclical unemployment.

The third is the combination of weak supply with weak demand, namely the formation of matched state of lower potential output capacity with weaker level of demand. Usually, when the dual economic development stage is coming to an end, source of traditional growth declines, at the same time, new source of growth has not been unearthed yet. Both situations above are normal states of neoclassical growth.

The fourth is the combination of weak supply with strong demand, namely the formation of unmatched state of lower potential output capacity with strong level of demand. In fact, this kind of situation only occurs when artificial interventions are implemented, namely stimulating investment or expanding exports through distorted policy means. In condition that potential output capacity decreases, if strong demand factors are artificially stimulated, real growth rate will exceed potential growth rate, which easily leads to inflation, excess production capacity, and even the bubble economy, etc.

In fact, the theoretical situations above formed according to the combinations of long-term supply factors with short-term demand factors' characteristics correspond directly to macroeconomic situations in China's history and reality. With the help of this theoretical abstract, we can understand the past, the present, and also predict the future.

First, the first situation is Chinese economy’s normal state before 2010, namely before the Lewis turn was completed. At that time, benefiting from the demographic dividend brought by demographic transition, supply factors were conducive to economic growth and Chinese economy had higher potential growth rate. For example, estimates we had made showed that potential growth rate from 1978 to 1995 averaged 10.3 %; potential growth rate from 1995 to 2009 averaged 9.8 %.

At the same time, resident income growth, rapid investment increase and export increase in large scale provided corresponding demand factors. Therefore, in general, macroeconomic balance was formed on high growth potential in this period. Growth rate gap presenting as the difference between potential growth rate and real growth rate has certain fluctuations among different years, but on the whole, its volatility is not large, which is also in a diminishing trend (See Fig. 5.4).

Second, the second situation is the state of economy when it encounters serious internal or external hits in the big trend of the first situation. For example, after the middle 1990s, China’s domestic macroeconomic downturn and the Asian financial crisis successively caused serious demand decrease and insufficient utilization of production capacity, then mass unemployment. Later, with China’s accession to the World Trade Organization and the aid of foreign demand, its economic growth rate rebounded to the potential output level and its macro economy returned to the normal state in the first situation. In addition, countermeasures for inflation from 1988 to 1989 and subsequent regulations, as well as the world financial crisis from 2008 to 2009, used to make the actual growth rate drop below the potential output capacity.

Third, 2012 is a typical year of situation three. Starting from entering the “Twelfth Five-year Plan” period in 2011, China’s potential growth rate has greatly decreased than before. According to our estimation, potential growth rate in 2012 dropped

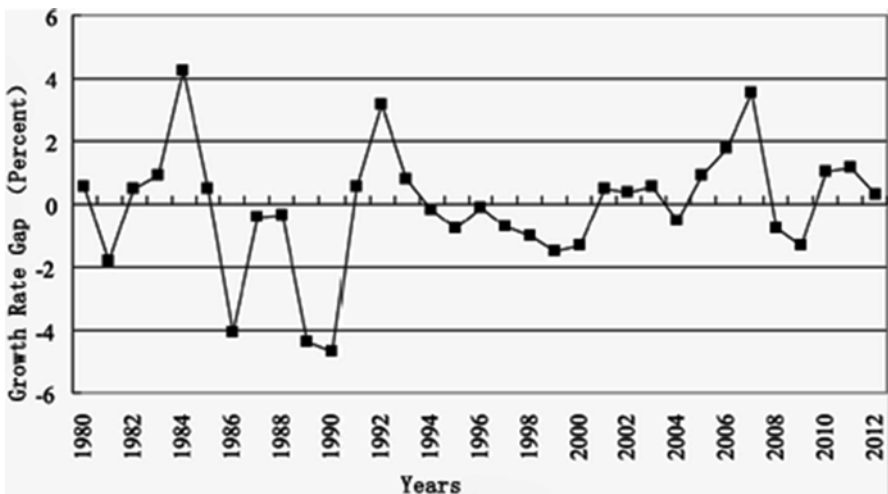


Fig. 5.4 Growth rate gap in the period of reform and opening-up (Source from: Fang Cai and Lu Yang 2013)

to 7.5 % from the previous year's 8.1 %. Under this condition, level of external demand happened to decline obviously, achieving unintentionally the matching of demand and supply. As a result, the actual growth rate did not obviously exceed the potential growth rate, thus no inflation was caused; also, since the former was not lower than the latter, no employment influence was encountered; instead, the balance of economic growth has been enhanced.

Finally, the main risk of China's future economic growth is the appearance of situation four. Both among economists and among practitioners, there exists a misunderstanding that the key factor determining economic growth is demand. Therefore, each time economic growth encounters obstacles, the most common countermeasures all point to taking some means to expand the internal and external demands. In fact, for China, after the middle 1990s, this understanding makes sense in the transition period from shortage economy to surplus economy. However, once economic development gets over the Lewis turning period and demographic dividend disappears, factor restricting economic growth would be potential output capacity, rather than the demand factor over a certain period of time at least.

In fact, contributions of consumption demand, investment demand and export demand to GDP growth rate in 2012 are respectively 4.04, 3.93 and minus 0.17 percentage points. Yet seen from the average level from 2001 to 2011, generally the contribution rates of these three are respectively 4.5, 5.4 and 0.56 percentage points. Even if in a certain period of time in the future, external demand's contribution becomes zero, investment demand decreases by half, while consumption demand remains unchanged, the demand factors are sufficient to support the requirements of potential growth rate.

Combining China's economic development stage with the recent situation, we can make a conclusion that the real challenge Chinese economy is facing does not lie in the short-term macroeconomic demand factors, but in the long-term sustainability of economic growth. In other words, the hope of exceeding potential growth rate by stimulating demand is a wrong choice. Instead, improving potential growth rate itself is the correct policy option.

However, insisting that lack of demand leads to sluggish growth in theory, and adhering to implement various policy measures aiming at stimulate demand in practice often become realities easily, potentially bringing disastrous consequences. About this issue, we might as well go back to the lessons from Japan.

For a long time, all circles in Japan widely think that the rapid economic growth realized by this country mainly depends on external demand, while domestic consumption demand has always been weak and flat. Therefore, once Japan got over the Lewis turning point in 1960, labor-intensive industries gradually lost their comparative advantages, and then lost the demographic dividend in the high-income stage of 1990 and the performance of total factor productivity was not sufficient to support the economic growth of neoclassical times. Under this condition, the government used a variety of measures characterized by government interventions, including industrial policies, expansionary fiscal policies and loose monetary policies, sparing no effort to expand domestic demand. Today, the so-called "Abenomics" characterized by loose monetary policies, is not less than a continuation of this policy tradition.

The logic from theory to policy above is actually wrong from top to bottom. First of all, strong researching evidence suggests that during the period of Japan's high-speed growth, consumption demand is a driving force that should not be ignored, while excellence export performance is the result of economic growth, rather than the reason.⁶ Second, there are researches suggesting that Japan's economic stagnation after 1990 was the direct result of its total factor productivity's poor performance.⁷ Misled by above theory and policy, Japan made unsuitable policy prescriptions and Japanese economy suffered the consequences over more than 20 years past: experienced bubble economy and its burst, zombie companies and zombie banks running wild, as well as up to 20 years of economic stagnation.

Regardless of financial risks, American economy is more sustainable, healthy and prosperous than high-income countries like Japan and even Europe, which also recovers faster from global financial crisis. The reason is not various versions of demand stimulus, nor states' positive roles as investors, but its cheap energy it tries its best to get, cheap labor force realized by demographic dividend's extension and relatively flexible labor market, which attract companies all over the world to invest, forming higher growth potential through the efforts of enterprises and society.

In 1990 when economic growth began to stagnate, Japan had already entered the rank of high-income countries. "The lost 20 years" after that caused various problems to Japanese economy, and this country's international status of competitiveness and innovation ability significantly decreased, however, generally the Japanese economy still continued to grow slowly in a sustainable way with low carbon emissions, and people enjoyed a rather higher quality of life. Therefore, we can say that Japanese economy over the past 20 years was in a high income trap.

However, due to that China has "getting old before getting rich" characteristic and is in the above average-income stage, if its demographic dividend disappears, and Chinese economy can not keep the necessary growth rate, or even slows down to the extend as serious as Japan, it will undoubtedly face with the danger of falling into the middle income trap.

5.4 Is It a "Middle Income Trap"?

When China was in the above average-income stage, it suffered the disappearance of demographic dividend, and then encountered the turning point of traditional economic growth source's exhaustion. Although this was a natural process of economic development, it did not mean that China would inevitably fall into the middle income trap by then, seen from many countries' lessons and experiences in world economic history, this potential risk undoubtedly exists.

For example, some economists use the percentage of each country's per capita GDP in that of the United States to define countries: those higher than 55 % are

⁶Lai Jiancheng (2010).

⁷Fumio Hayashi and Prescott (2002).

high-income countries, those between 20 and 55 % are middle-income countries and those less than 20 % are low-income countries. Among the 132 countries in comparison, 32 were defined as middle-income countries in 1960 and this number was 24 in 2008. If we observe this group's characteristics of change, we can find that about half of the middle-income countries have the possibility to remain in the middle-income stage after nearly half a century, while those leaving this group mostly flow down to the low-income group and less to the high-income group.

If here we use Tolstoy's famous saying “All happy families are like one another; each unhappy family is unhappy in its own way”, maybe we can say countries falling into the middle income trap each has its own reason. For example, the International Monetary Fund (IMF) conducted an empirical analysis on the risk of Asia-Pacific countries' economic slowdown and thus their falls into the middle income trap, after that, they ascribed the risks faced by Malaysia, the Philippines and China to institutional factors, thinking that Vietnam, India and Indonesia were facing the risks of insufficient transportation and communication infrastructures, while on the other hand, compared with the Asia-Pacific region, the Latin American countries had defects more obvious in terms of regional integration and trade.⁸

However, we can still integrate the related factors according to the logics of economic analysis, observe their causal relationship, and find something with regularity and universality, thus we can learn from other countries to avoid repeating mistakes they have made before. In other words, although the similarity between middle income trap and poverty trap is that both are equilibrium traps in an ultra stable equilibrium state difficult to be broken by conventional forces, the difference between them is also very obvious, that is, if the poverty trap is a continuation of long-term Malthus state, whose direct causes are usually hard to suddenly find out, while the middle income trap is often caused by some visible policy mistakes.

As a result, we can take different countries' policy mistakes in the process of economic development for empirical basis, and construct a circular causality relationship for middle income trap, thus to take a look at what are the necessary steps to fall into the middle income trap and which factors make a nation unable to escape from this vicious cycle, so that we can find the entry point to break the causal links in policy.

Step one: rapid economic growth slows down in a particular period of the middle income stage. For a less developed country, a higher growth rate is often easy to be achieved and in the transitional stage of development from poverty trap to middle-income through capital accumulation and labor input. However, when it reaches a certain stage of development or its previous sources of growth disappear, or it makes some policy mistakes, usually it will experience a sharp drop in growth rate.

For example, through international comparison, some scholars find that according to the purchasing power parity (PPP) in US dollar terms of 2005, when per capita GDP reaches 17,000 dollar, rapidly growing economy will often suffer a significant slowdown, generally dropping down by 60 % in economic growth rate.⁹

⁸Shekhar Aiyar et al. (2013).

⁹Eichengreen et al. (2011).

Step two: under the condition of sharp slowdown in economic growth, if we have the wrong understanding of the nature of problems, our policy responses are often quite opposite, which are not only far from effective, but even cause artificial distortions, probably making slowdown in growth become economic stagnation. For example, if the reason of slowdown is the decrease of potential output capacity, but the government's policy focuses on stimulating growth on the demand side, a series of distortions and negative effects will be caused. Among them, nothing is more serious than government's excessive use of industrial policy, causing the distortions of factors' prices, while the most severe policy consequences are inflation, the bubble economy, excess capacity and improper protection for backward industries and enterprises. By this time, slowdowns which may be originally normal or temporary will turn into long-term slow growth or even stagnation instead.

Step three: in the face of a series of social problems brought by stagnation of economic growth, government further takes measures in the manner of "drinking poison to quench thirst", resulting in comprehensive distortion of social economic system. For example, in condition that economic growth stagnates and "the cake" can no longer be made bigger, redistribution of this cake leads to common rent-seeking incentives in society and causes corruption. Since the privileged groups tend to get a bigger share of income as well as the existence of Matthew Effect in income distribution, the situation becomes increasingly worse, thus intensifying social contradictions. At this moment, government with struggling finance can often and only rely on populist policies for which they have made promises but can not realize them. These policies are not only unhelpful; instead, they hurt the incentive mechanisms in economic activities.

Step four: the serious unequal distributions of resources and incomes accompanied by stagnant economic growth give rise to the vested interest groups, and the latter try their best to maintain this distribution pattern which is beneficial for them, therefore, system drawbacks of middle income trap are not easy to be broken. Once entering into this system state, relevant economic and social policies will be captured by interest groups, not only economic growth will come to a halt, institutional evolution will be more difficult, thus system not conducive to economic growth is solidified.

Correspondingly, all kinds of factors of production are no longer allocated according to the principle of maximum productivity, but to the principle of maximum vested interests. Once a country falls into this situation, its worst result is that it not only can not get rid of the middle income trap, but might even drop back to the low income level.

Since these steps above have a causal relation in timing sequence and logics, thus blocking the possibility of its malignant spread from the logical starting point is the most effective countermeasure. At the same time, the phenomenon of each step can also exist concurrently, thus the countermeasures should be comprehensively coordinated. Seen from some countries' experiences, before slowdown or even stagnation of economic growth, usually, system drawbacks not conducive to sustainable growth have already shown up, and the deterioration of income distribution often directly hurt economic growth itself.

Therefore, the relationship between income distribution and the middle income trap is: under the condition of economic growth and income growth's stagnations, the income gap often becomes worse. On the other hand, if the gravity of expanding income gap along with economic growth reaches a certain limit but is not stopped by effective policy measures, it will cause social instability and reduced social cohesion, thus becoming an obstacle of economic growth, as well as the reason for its slowdown or even stagnation.

5.5 Responses with Chinese Characteristics

In the case of demographic dividend's disappearance, assuming that other conditions remain unchanged, decrease of potential growth rate down does not mean that China is bound to fall into the middle income trap. Ultimately, demographic dividend is just the source of economic growth in a particular development stage. Only when it is replaced by a new source of productivity improvement, can dual economic development transfer into neoclassical growth, realizing the transition to high income stage. In fact, when the window of population dividend is closed, the door for more sustainable economic growth is already there, thus the most important thing is whether you can open it or not.

A main purpose of economists' dividing economic development into stages is that they hope successors learn experiences and lessons from forerunners, so that they can find a more smooth way of studying with less detours. According to the above steps of falling into and being perplexed by the middle income trap, as well as combining with the reality of China's economic growth, we should plan ahead from the following aspects.

At present, the most important thing for China is to understand accurately the slowdown of its economic growth, to find a really suitable prescription, and to form consensus among economists and policy makers. In 2012, when the performance of potential growth rate's decline was preliminarily revealed, opinion and theoretical circles were full of misleading claims. No matter journalists or macroeconomic analysts, almost all of them attribute economic problems to insufficient demand. To be specific to that year, when talking about insufficient demand, it has no difference from saying that America's sluggish recovery from the financial crisis, along with factors such as the European sovereign debt crisis strikes China's export demand.

In the troika of demand factors, external demand can not be controlled by us; consumption demand can not be greatly improved in a short period of time. Therefore, the next logic is naturally to be expanding investment demand through increasing investment intentions. Some economists form a tendency of exploring a "new economic growth point" for a short while. From a long-term point of view, people put forward suggestions such as speeding up the urbanization process, increasing investment on infrastructure constructions in the Midwest areas and making beforehand investment on emerging industries. Sometimes, people also blur

the difference between long-term structural problems and short-term cyclical problems, and suggest stimulating macroeconomic policies.

These suggestions are not only based on the wrong judgments of economic development stage and macroeconomic situation, they also have some dangers specifically. That is, these kinds of suggestions are very likely to be consistent with the policy measures which governments are good at. The intention of promoting urbanization, regional development strategy and industrial policy should serve policy combinations for specific purposes, having their unique meanings and applicable scopes. In this regard, the Chinese government already has mature policy tools and means of implementation, and even can be said to be adept, with some good results having also been achieved in the past. However, once these policies are used to drive investment demand in order to achieve the goal of transcending potential growth rate, they will be counter-productive, hurting Chinese economy's sustainability of long-term growth.

For example, industrial policy is originally for conditions when traditional comparative advantages disappear, the government helps investors and enterprises to search for new comparative advantages in the form of a certain amount of subsidies, which focus on long-term growth sustainability. However, if this policy is turned into short-term means of stimulating demand, then the government's supportive policy will lose its limitations. Facing government preferential policies and direct subsidies, rent-seeking behaviors will inevitably appear. Investors and enterprises will pour in, not even considering comparative advantages or competitiveness, nor caring whether there is market demand or not. The results are undoubtedly deviating from comparative advantage, aggravating excess capacity and causing inflation and even asset bubbles.

Let's take another example. Regional development strategy focusing on central and western regions as well as resource-exhausted regions is meant to promote balanced economic development among different regions through the central government's supportive policies. However, if this policy becomes a means of stimulating investment in order to transcend the potential growth rate, industrial developments of regions as objects being supported will inevitably deviate from comparative advantages, lacking competitiveness in both international and domestic markets, while long-term economic growth will be hurt instead.

Excessive use of macroeconomic policies will also lead to the same results. Monetary policy and fiscal policy normally should be used to adjust short-term demand fluctuations. However, economic policies aiming to make economic growth rate higher than the potential growth rate for a long time tend to make loose monetary policy and expansionary fiscal policy permanent and normalized, which will inevitably help to enlarge the distortion effects of industrial and regional policies. Excess liquidity will also encourage speculative bubble economy and protect enterprises with backward production capacity and less competitiveness as well as sectors with low productivity.

The original meaning of potential growth rate is normal economic growth rate which can be realized under the condition that factors of production supply is

determined by resource endowment, as well as on the basis that a range of other factors determine productivity improvement. Therefore, transcending the potential growth rate in a demand-driven way is like trying to drive the athletes' performances up to above their potentials through executive orders, publicity and means of material incentives, perhaps being effective temporarily or occasionally, while eventually leading athletes to get injured.

However, we are not helpless in the face of declining potential growth rate, nor should we not do anything. Due to having experienced the turning point of demographic dividend's disappearance, potential growth rate's decline will be unusually sharp, at this time, the phenomenon of structural unemployment may occur, government revenue will be suddenly stressed, and the investment circle is also desperate for help. Under the condition that government clearly sees the situation and tightly controls the monetary spigot, non-substantial economies tend to take unusual means to create money supply since their lack of capital, thus causing potential financial risks. Therefore, laissez-faire isn't the best policy choice.

As sports training is not perfect, system determining factors of production supply and productivity improvement also has drawbacks, which leaves us a huge room for improving the potential growth rate from the supply side. Therefore, when people talk about creating system dividend through reforms, they essentially mean creating better system conditions for factors of production supply and productivity improvement, thus achieving the goal of increasing potential growth rate.

So far, market mechanism has not yet played a fundamental role in the allocation of resources, and the space for improving productivity is still huge, therefore, deepening the reform of economic system and perfecting the system of socialist market economy can bring new source and power for China's economic growth. In the following chapters, we will analyze respectively various system factors hindering factors of production supply and productivity improvement, find out fields urgently needing reforms as well as priorities being promoted, and put forward policy suggestions.

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Chapter 6

Engine for Sustainable Growth

After the arrival of the Lewis turning point during the period from 2004 to 2010, the growth slowdown China faced is the natural result of potential growth rate's decline, rather than caused by the impact of demand factors. On the specific development stage, attributing the slowdown of economic growth to insufficient demand is a common mistaken understanding, which easily leads to biased policy orientations and unsuitable policy prescriptions. As a result, referencing relevant economic theories with an open mind, draw experiences and lessons from other countries, and deeply understand Chinese economic reality, have vital policy significances for understanding the real reason of this slowdown, which helps preventing the occurrence of fishing-in-the-air policy misguidance and leads corresponding policy efforts to the right direction of seeking new growth engines.

6.1 Focusing on the Supply Factors

Whether athletes can get good grades or not indeed relates closely with encouragements and motivations from society, such as sports officials, advertisers and Internet users, etc. However, ultimately these impacts from outside can only help athletes to give play to their potentials, rather than determine their performances, which are not a sufficient condition. Through analogy with economic phenomena, external motivation is only a kind of demand factors, while the key to determine the athletes' grades is the "potential growth rate", which belongs to factors on the supply side.

If a player is given expectations higher than his athletic potential, it is not hard to imagine he would react. Since strengthening the physical fitness and level of training to improve performance in the short term is an untouchable goal which violates laws of physiology, I'm afraid there are only two choices for him: for a man capable of being self-constraint morally, he can only desperately go beyond his physical

limit and eventually get injured; for a man with poor ability of moral self-constraint, or being lured by unscrupulous coaches or teams, he might think other dishonest practices, such as doping.

Economic policies not changing the growth potential but just concentrating on demand stimulus will give inappropriate guidance to subjects of economic activities, namely investors and entrepreneurs. For example, no matter the implementations of loose monetary policy or expansionary fiscal policy, or the stimulation of demand through industrial policy and regional policy, both their policy starting points are encouraging investment in real economy. However, investment activities at this time are not in conformity with intrinsic motivations for investing, which almost become a kind of rent-seeking activities induced by government subsidies, usually only leading to overcapacity.

At the same time, under the condition that potential growth rate declines, the comparative advantage and competitive advantage of manufacturing production are both decreasing, production enterprises whose productivities remain unchanged can no longer sustain themselves. When the real economy is not strong, enthusiasm for project construction, such as infrastructure is not high, either. For example, when Japan tries to stimulate economy through large-scale public investment, it meets the embarrassing situation of investment capital difficult to be in place. Isamu Miyazaki, former chief of Japanese Economic Planning Agency, has found that in the implementation of fiscal stimulating policies, public investment will meet deduction problems layer by layer, starting from “budget having been made has not been allocated”, then to “budget having been allocated has not been in place”, and finally to “capital has been in place while project has not been started” and etc.¹

After the outbreak of world financial crisis in 2009, quantitative easing monetary policies with low interest rate and zero interest rate economic growth appear to be “the life-saving straw” which Europe and the United States as well as Japan have competed to throw out. Among them, Japan had already been on this rugged road for more than 10 years. The problem is that if a country really faces the problem of insufficient demand, easing financial conditions do not naturally turn into companies and investors’ investment desires; if a country is facing the problem of potential growth rate being too low, easing financial policies which stimulate demand will not be suitable for curing the ills of real economy’s lack of competitiveness.

Not only that. At this time, excess liquidity will inevitably flow to unproductive or speculative fields for investment, such as the financial industry, real-estate industry and overseas real-estate investment, etc., firstly forming the bubble economy, followed by the bursting of bubble, and finally pulling economic growth to the abyss of long-term stagnation, just as what has happened in Japan from the 1980s to the early 1990s.

Just as in the face of athletes’ poor performances, we should focus on internal factors such as physical conditions, athletic potentials and the levels of training instead of seeking solutions from external motivating factors, when we meet the situation that decline of potential growth rate leads to the slowdown of economic growth, we should focus on factors on the supply side and explore the source to maintain sustainable growth.

¹ Gong Qiyong (2009).

Remember the argument between former Prime Minister of Singapore Lee Kuan Yew and American economist Krugman we have talked about in the fourth chapter? From their dialogue full of heated disputes, we can not only clarify what are the factors on the supply side to realize economic growth, but also understand what are Lewis turning point's influences on the supply side of economic growth, as well as what policy options we have.

On the basis of other economists' work, Krugman thinks that Singapore's economic growth simply relies on capital and labor inputs (undoubtedly also growth factors on the supply side), while total factor productivity (more durable growth factors on the supply side) is not increased, which has no difference from the Soviet Union under the condition of planned economy, and eventually it can not be sustained.

The Krugmans' judgement cannot be approved by Lee Kuan Yew, and Krugman's predictions have not come true. The reason is that before the Lewis turning point's arrival, like other East Asian economies, Singapore had the characteristic of infinite labor supply, which helped it to avoid the occurrence of diminishing returns on capital; after the arrival of Lewis turning point, Singapore did not make efforts to stimulate demand, but focused on increasing the potential growth rate on the supply side, which relied on foreign workers to extend the demographic dividend, and avoided the decline of return on investment through improving labor productivity.

Lewis pointed out: "The key of the whole process (of dual economic development) is capitalist sector's use of surplus."² According to this train of thought, summarizing Singapore's experience will promote understanding for how to maintain economic growth after the arrival of Lewis turning point. Here, we use Fig. 6.1 to take a look at how to maintain the returns on investment before and after the Lewis Turning Point arrives, respectively.

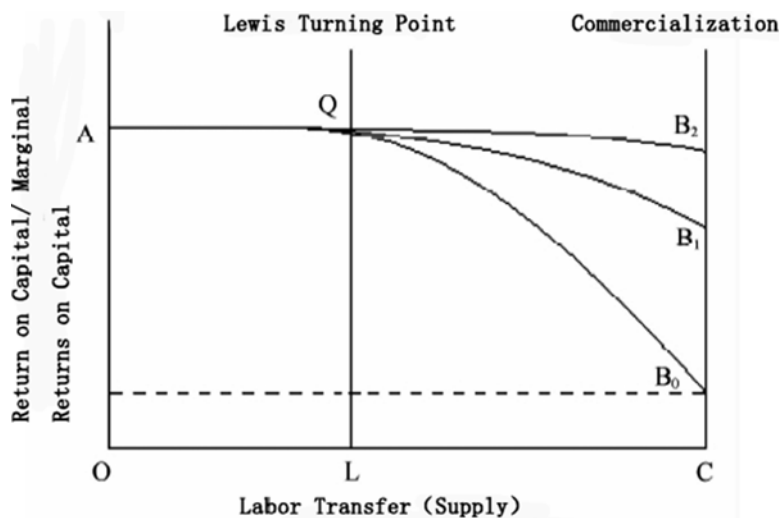


Fig. 6.1 Returns on investment before and after the Lewis turning point

²Lewis (1954).

Before an economy reaches the Lewis Turning Point, the process of agricultural labor force transfer is represented by OL, the characteristic of infinite labor supply can give capital accumulation a same proportion of labor supply, thus the phenomenon of diminishing returns on capital will not appear, besides, labor transfer among sectors can create resource reallocation efficiency, thus return on investment can be maintained at a high level, as indicated by AQ in this figure. Many scholars' studies prove that China's economy has indeed maintained a high return on capital for quite a long period of time.³

Along with economic development reaching the Lewis Turning Point, namely the marginal productivity of agricultural labor in theory is no longer being zero, the phenomenon of labor shortage and wage increase will be presented, thus the relative scarcity and therefore the relative prices between capital and labor then will change, therefore, the phenomenon of labor being replaced by capital will emerge and diminishing marginal return on capital will appear. Many researches have shown that the phenomenon of significant and rapid diminishing marginal return on capital has appeared in China. For example, in the short period from 2004 to 2009, Chinese economy's marginal return on capital dropped by 18.7 %.⁴

Assuming that other factors being constant, we can expect that the downward trend of diminishing return on capital will continue, as shown by QB_0 in Fig. 6.1, until economic development reaches the commercialization point, when marginal labor productivities of agricultural and non-agricultural industries become equal, then dual economic development stage comes to an end. However, as shown by QB_1 and QB_2 in Fig. 6.1, there are some possibilities to slow down or stop the rapid decreases of marginal return on capital and/or return on investment.

Marginal return on capital is the output increase brought by every additional unit of capital input under the condition that other factors remain unchanged. Therefore, it is the basis of return on capital investment, but not the latter's only source. There are two reasons for economists like Krugman to mistakenly think that Singapore's return rate on investment will decrease inevitably: one is that they do not understand that infinite labor supply can prevent the occurrence of the phenomenon of diminishing marginal returns on capital, the other is that they a priori assume that Singapore can not be transferred into a new way of growth, with which it keeps a higher return on investment through the improvement of productivity.

Lee Kuan Yew can proudly declare to Krugman that Singapore's return rate on investment is still very high, the reason is that Singapore has delayed the arrival of diminishing marginal returns on capital due to its flexible immigration policy, and eventually realized its transfer to productivity-driven way of growth.

We can draw inspiration from Singapore's experience, namely we can divide the marginal return on capital and return on investment, and take a look at which policy measures can have favorable impacts respectively on these two. In Fig. 6.1, we use QB_1 's improvement relative to QB_0 to represent the delay of the diminishing marginal returns on capital, and use QB_2 's improvement relative to QB_1 to represent the

³Chong-en Bai et al. (2006).

⁴Fang Cai and Zhao (2012).

effect of maintaining high return on investment which can be achieved by other factors.

The key for dual economic development to avoid diminishing marginal returns on capital is the existence of the unique phenomenon of infinite labor supply, which can break the neoclassical condition of labor shortage. Therefore, practices which can increase labor supply and ease the phenomenon of labor shortage can slow down the process of diminishing marginal returns on capital.

However, the period of dual economic development will come to an end eventually, while neoclassical growth stage is just the destination any late-developing country wants to reach in the end. Therefore, diminishing returns on capital will be inevitable after all, and the key to maintain return on investment lies in the improvement of labor productivity. In other words, labor productivity will not prevent the decline of marginal returns on capital, but offset the effect of declining returns on investment caused by the latter, thus maintaining economic growth.

Generally speaking, there are various ways to improve labor productivity, including using machine to replace labor force, improving the proficiency of workers, adopting more efficient technology and process, and improving the allocation efficiency of factors of production, etc. In the statistical sense, human capital can be measured, machine's replacement of labor can also be observed from capital-labor ratio's increase, thus other factors become a residual in econometric model, or being called the total factor productivity under the condition that they can not be observed directly in the form of statistical variables.

With econometric method, we can make some simulations to take a look at the increase of labor participation rate, a factor which can delay the phenomenon of diminishing returns on capital, as well as the improvement of total factor productivity, a factor which can maintain return on investment, thus to see what effect they each has for improving potential growth rate.

Simulation results on China's economy show that, during the period from 2011 to 2020, if we increase labor participation rate of non-agricultural industries to 1 percentage point per year, potential growth rate of annual average GDP can increase by 0.88 percentage point during this period. In the same period, if the annual average growth rate of total factor productivity increases by 1 percentage point, then potential growth rate of annual average GDP can increase by 0.99 percentage point.⁵

For China, no matter it is improving labor participation rate, or improving total factor productivity, both of them have great potentials, while developing these potentials depends on deepening reforms in related field. For example, stabilizing transferred agriculture labor force's employment in urban areas through advancing household registration system reform; transferring manufacturing industries to central and western regions; further developing and improving labor market to promote more full employment, as well as improving agricultural labor productivity, they are all conducive to improve labor participation rate.

⁵Fang Cai and Yang Lu (2013).

There are also various ways to improve total factor productivity, for example, in the case that agricultural labor force's proportion remains still high, if we promote the continuous transfer of labor force surplus, we can continuously gain the resource reallocation efficiency. In addition, we can also create resource reallocation efficiency by creating a fairer competitive environment, allowing factors of production's free flow among industries, sectors and enterprises, letting long-term inefficient enterprises drop out of business and expanding efficient enterprises accordingly.

What this simulation we have done here does not mention is that the improvement of laborer's human capital undoubtedly helps to greatly improve the potential growth rate. The ways of human capital accumulation include all kinds of educations and trainings, as well as "learning by doing", etc. The motivation, quality and effect of educations and trainings, along with learner's adapting ability for labor market are related to a series of system factors, which also put forward further requirements for reform.

6.2 Labor Productivity

Economists who have paid attention to growth have long found that differences between countries' economic development levels are in the end differences of their productivity. Productivity generally refers to the output capacity level created by a certain level of input, in which "input" can refer to different factors of production, such as capital, labor and land, so productivity can refer to capital productivity, labor productivity and land productivity. However, the most frequently used and most comprehensive productivity index, which is also quite meaningful, is labor productivity, namely the index using output capacity of labor factor to measure economic efficiency.

Statistical departments or researchers measure labor productivity on the overall level, which they can calculate the GDP produced by each employee, or they can calculate the GDP produced in each working hour. Apparently, there are differences between countries on statistical caliber, data availability and reliability, and different researchers also tend to take different measurement methods, therefore, different researches often lead to different results of labor productivity measurement. For this, the attitudes we should adopt are admitting the existence of differences between methods and the necessity of diversity, while supporting the issue we try to explain with cross-validations based on different researching results.

Wu Xiaoying is good at using unique methods to adjust data like GDP and conducting researches relating with productivity issues. He emphasized labor productivity's vital importance for economic catch-up through transnational horizontal comparison. He also found that late-developed economies' labor productivity improvements were usually much faster than early-developed countries since the former had more technical availabilities. For example, on a comparable economic development stage, the speeds of China Taiwan and South Korea's labor productivity growths were much higher than that of Japan. However, mainland China did not

show a better performance of labor productivity than Japan, South Korea and China Taiwan in the similar catch-up process.⁶

In fact, this problem is not difficult to understand, we only need to observe how the planned economy system prevented labor to be allocated to non-agricultural industries before China's economic reform, thus to what extent it had accumulated mass and large proportion of agricultural labor surplus, forming the atypical employment. These above would be sufficient to explain how big China's employment pressure was before the reform and opening-up started, and how big the scale of labor to be transferred was.

According to the principle of comparative advantage and the hypothesis of induced technological evolution, China's economy with serious labor surplus has formed the largest scale of labor migration in human history since the reform and opening up. During quite a long period, China has focused on developing labor-intensive manufacturing industries and absorbed a large number of agricultural labor surpluses, which are quite rational on both macroscopic and microscopic scales, specifying more clearly that market mechanism has played a good role.

Since joining the WTO, China's labor-intensive manufacturing enterprises in coastal regions have attracted labor force transferred from rural areas with lower and long-term stable wages, gaining strong competitiveness in international market. Abundant labor supply with low cost is an important factor for China's realization of high economic growth during this period. Therefore, Lewis turning point and the disappearance of demographic dividend's influences on economic growth will be concentratedly demonstrated as labor supply becoming a "bottleneck", along with comparative advantage and competitiveness declining correspondingly under the condition that wage increase leads to higher labor cost in manufacturing industries.

However, theoretically speaking, these disadvantageous factors can be offset by the improvement of labor productivity. The improvement of labor productivity can not only be manifested as the increase of each laborer's output level, but also be manifested as the decrease of quantity of labor force needed by unit output. As a result, even China's economy encountered labor supply "bottleneck" after experiencing the turning point, if labor productivity can increase with a certain speed and scale, it is sufficient to make up for the production decrease caused by lack of labor force, thus maintaining the speed of economic growth.

From another perspective, synchronized wage increase based on labor productivity just only increases workers' incomes and most widely shares the economic development achievements among inhabitants, which is not destined to hurt comparative advantage and sustainability of economic growth. Otherwise, do we really hope to never improve the wages of ordinary workers just in order to maintain manufacturing products' competitiveness?

⁶Wu Xiaoying: Get Rid of the Complex of Speed and Give Space to the Reform— to View the Economic Growth Rate and Its Implications for the Structure Adjustment and Efficiency Improvement from the Comparison between China and East Asian Economies, China Economic Review. Globe Vision and Decision-making Reference edited by Boyuan Foundation, the 11th main journal of 2012 (the 60th of all).

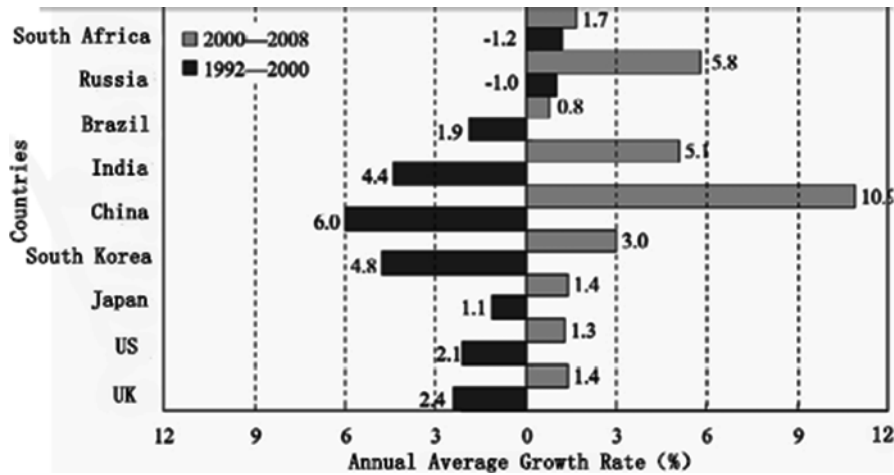


Fig. 6.2 Increasing speed of some countries’ labor productivity resource (From <http://kilim.ilo.org/2011/download/kilm17EN.pdf>)

In fact, when we talk about synchronizing wage increase with labor productivity improvement, of which we are emphasizing to let people share the benefits. We are also emphasizing that wage increase must be based on labor productivity improvement in order not to weaken enterprises’ competitiveness and thus to maintain Chinese manufacturing industry’s comparative advantage.

Quoting different countries’ data of labor productivity released by Conference Board, we can know that since 1992, China’s labor productivity growth speed calculated by per labor GDP is faster than most of the countries worldwide, including the developed countries, developing countries and the BRICS, which has been speeding up since entering the twenty-first century (Fig. 6.2). The trend of accelerating improvement of China’s labor productivity is undoubtedly the outcome of normal reaction for higher wages.

However, another study on Chinese manufacturing industry shows that although labor productivity’s growing speed is very fast, it still hasn’t caught up with the speed of wage rise after the arrival of Lewis turning point, therefore, if we calculate unit labor cost, an index which synthesizes factors of cost and labor productivity, thus can reflect manufacturing industry’s competitiveness, we can see that during the period from 2004 to 2009, nominal hourly wage of Chinese manufacturing industry increased by 72.7 %, faster than hourly labor productivity’s increasing speed (48.8 %), leading unit labor cost to increase 16.1 %.⁷

The saying that labor productivity can offset labor shortage’s weakening effect on growth potential seems to contradict with the saying that potential growth rate will inevitably reduce after demographic dividend disappears. In fact, both of these two statements make sense in theory, but after the Lewis turning point appears,

⁷Du Yang and Qu Yue (2012).

requirements for improving labor productivity will be greatly enhanced, which also easily generates various misguidance, thus making it more difficult to achieve the effect of improving potential growth rate to a certain extent.

In the stage of dual economic development, since there *are a lot of labor surpluses* in agriculture, we only need to transfer labors from sectors with low productivity such as agriculture to non-agricultural sectors with higher productivity, thus Chinese economy's labor productivity as a whole will be improved. Therefore, in this stage of development, the opportunity of improving labor productivity is extremely easy to be available as "low-hanging fruit". With such opportunities for resource reallocation becoming fewer and fewer, improving labor productivity is no longer that easy.

Now, let's look at which ways the improvement of labor productivity is usually realized through. If we calculate the output realized by each laborer or labor time, at least four obvious factors have affected the performance of labor productivity. These factors or ways of improving labor productivity will play a big or small role according to time and place, with their difficulty level of achieving good results and sustainability also varying.

The first factor is laborer's ability, which can generally gained through developing general education and vocational education, providing on-the-job training and strengthening medical and health protection, etc. They can be generally referred to as human capital, which will play a bigger and bigger role in labor productivity improvement as a whole, at the same time being sustainable in the long run.

The second factor is laborer's capital equipment level, such as the number or scale of machines and equipments each worker can operate, which can be specified by capital-labor ratio in statistics. When labor shortage appears and ordinary workers' wages starts to rise constantly, the trend that capital input of the whole economy, especially of the industrial sectors grows faster than labor input, performing as the improvement of capital-labor ratio.

The third factor is the allocation efficiency of various factors of production, including the coordinated allocation among them, as well as their reasonable allocation among enterprises, industries and regions, or among economic activities of different ownership and scale. This efficiency originates from factors of production's full flow, and it is an important component of total factor productivity.

The fourth factor is the efficiency generated by technological progress and system innovation, presenting as typical total factor productivity. Generally speaking, total factor productivity is an eternal source of labor productivity improvement and economic growth. As economic development enters into the neoclassical stage, economic growth depends increasingly on this source of productivity.

6.3 Capital-Labor Ratio

Which pattern a country's industrial structure presents, and what kind of technology type it adopts as a whole are usually determined by the relative scarcity and relative prices of this country's factors of production in a specific stage. Therefore, in terms

of a particular stage of development, there exist no problems of whose industrial structure and technical structure are better among countries.

In a typical dual economic development stage, labor is abundant and cheap, and enterprises tend to adopt technologies which need more labor and less capital, thus industrial structure has the characteristics of high labor-intensity and low capital-labor ratio. Only in this way, can a country obtain comparative advantage and competitive advantage on enterprise-level, industry-level and nation-level.

Once crossing the Lewis turning point, relative scarcity of factors of production is reversed. Accordingly, comparative advantage and competitive advantage also vary gradually. Therefore, relative to factors of capital, after labor prices' increase, enterprises tend to use more labor-saving technologies, with their industrial structures being more capital-intensive and capital-labor ratio being increased accordingly.

The first to respond to changes in relative prices of the factors of production is enterprises. When entrepreneurs feel the difficulty of recruiting workers and the increase of labor costs, they will usually buy more machines and hire fewer workers. Investors will also react to this new endowment structure of factors of production, and they will start to invest in industries consuming less labor, namely the more capital-intensive ones. Further, the government will follow up accordingly. When government observes the change of comparative advantage, it often uses some supportive industrial policy measures to encourage investors to invest in industries having potential comparative advantages, which are also relatively capital-intensive or technology-intensive.

If more machines are equipped, labor is appropriately saved and each worker is made to create more output in the case of controlling more machines, this means labor productivity is improved. However, simply relying on increasing capital-labor ratio to improve labor productivity may lead to two problems of sustainability.

First of all, the effect of labor productivity improvement generated by capital's replacement of labor is not enough to fill the gap caused by economic growth rate's slowdown. In dual economic development stage, labor surpluses in agriculture are transferred to non-agricultural industries in great scale, which means labor resources are reallocated from sectors of low productivity to sectors of high productivity, bringing a huge labor productivity improvement and supporting the rapid economic growth. After the Lewis turning point, this effect of resource reallocation between agriculture and non-agricultural industries will inevitably weaken gradually, no longer being the main source of supporting economic growth.

At this time, capital (machine)'s replacement of labor is indeed a means of improving labor productivity and sustaining economic growth, while new machines and equipments also embody factors of technical progress, however, if the productivity gap can not be filled in condition that there are no total factor productivity's contributions of technological progress and system innovation, economic growth is difficult to maintain the expected level.

Under the effect of the law of diminishing returns on capital, labor's replacement of capital has a limit; especially, it can not be too quickly conducted in the way of "great leap forward". For example, in condition that operator's human capital is not

fundamentally improved, more, more complex and more valued machines can not get effectively operated, thus return rate on capital input will ultimately drop down.

Second, there exists another possibility, namely the cost for improving capital-labor ratio is higher than its economic benefit and therefore labor productivity is not improved. In normal market environment, prices for factors of production have no distortions, thus we can predict investors and enterprises, and keep capital's replacement of labor in control completely and rationally. However, if the government interferes, the situation of capital allocation's deviation from efficiency will appear. Government's behavior which causes distortion of capital allocation may be originate from several different motivations below.

First, government hopes to encourage investors to explore new comparative advantages through industrial policies; therefore, it offers subsidies to some sectors and enterprises. For example, many local governments have established local pillar industries and leading industries in the future, which they try to include into nation-supported industry planning, and they will build low-cost investment conditions through financial subsidies and preferential loans. However, as private investors may have failure in their choices, this choice made by government does not necessarily conform to dynamic comparative advantage's direction.

Second, government attempts to implement loose monetary policy to stimulate investment and drive demand, thus forming macroeconomic policy environment of excess liquidity and causing lack of constraints for investment and financing costs. This financial environment not only encourages excessive investment, but also cannot play the role of "survival of the fittest", which will eventually leads to the generating of mal-investment, causing a lot of enterprises and industries' capital intensity higher than the normal requirements of comparative advantage.

Third, government does not want certain enterprises and industries to perish, thus it tries to save them to survive in relentless competitions. A disadvantage of government's choice of dynamic comparative advantage lies in the fact that different from a single investor, a government is not willing to accept choice failure. Therefore, for the investments conducted with the government support (especially the big projects), or the enterprises being paid government's special attentions (for example, state-owned enterprises), even if they have made mistakes, the government will not let them being eliminated from the market. Therefore, these enterprises of mal-investment and poor management have captured the government and continue to get capital injections instead.

These policy motives and policy measures will produce the effect that financing and investment costs are artificially pressed down, thus the price of capital factor is distorted. However, such policies can not be generally preferential, which will inevitably form an implementation way of "government picking winners". For those enterprises and investors being benefited for this or that reason, capital-labor ratio's increase is financially advantageous. Nevertheless, this is seen from the micro level in terms of individual or certain enterprises and investors, while seen from the economy as a whole, this does not necessarily leads to the improvement of labor productivity.

On the other hand, selectively providing cheap capital supply actually means deprivation of capital availability for other enterprises, investors and industries. Giving some participants of economic activities preferential financing environment of capital-availability, from another perspective, is discriminatory financing environment for the other participants. Those potential investors and enterprises being neglected not only cannot receive the same equal financing treatment, but even have lost fair market environment for factors of production.

In a period of intense adjustment of industrial structure, grasp of a new comparative advantage and improvement of productivity often depend on thousands of small and medium-sized private enterprises' venture investments, thus to ultimately make the future industries and technology leaders to win out in a kind of competition of creative destructions. Policies which distort capital allocation are meant to protect investments and enterprises of low efficiency, inhibit efficient investment activities and enterprise managements, and even kill the potential innovative activities.

Therefore, if without this kind of creative destruction mechanism, potential opportunities for innovation will be greatly reduced, and productivity of the whole economy will not be improved along with the increase of capital-labor ratio. It is clear seen that, increasing capital-labor ratio is not a perfect way of improving labor productivity, nor is it a sustainable source of the latter.

Japan can provide lessons with reference meanings in this respect, since it has experienced "Twenty Lost Years". Starting from 1990, Japan's dependency ratio of population started to rise, meaning that the demographic dividend was disappearing rapidly. Japanese economy's response to this is just through the various ways we have discussed to put more physical capital, namely to increase capital-labor ratio. As a result, among Japanese economy's average labor productivity improvement, capital deepening's contribution rate increased significantly from 51 % (during the period from 1985 to 1991) to 94 % (during the period from 1991 to 2000), while during the same period, the contribution rate of total factor productivity dropped straightly from 37 % to minus 15 %.⁸

In fact, in the studies about Chinese economy, there is no lack of convincing examples in this aspect. As is well-known to all, the financing conditions for the state-owned economies have great superiorities over those of the non-state-owned. And this kind of differential treatment for financing causes sustainability differences of productivity improvement. According to an econometric analysis,⁹ during the period from 1978 to 2007, among the improvement of China's labor productivity (output per labor), the contribution rates of capital-labor ratio (capital per labor) and total factor productivity are respectively 26 % and 74 % in non-state-owned economies; while things are just opposite in state-owned economies, with these numbers being 74 % and 26 % respectively.

These research findings' direct revelations are under the condition that capital-labor ratio contributes a lot for improving labor productivity and is growing rapidly, it often leads to total factor productivity's corresponding contribution's decline. In

⁸Asian Productivity Organization (2008).

⁹Brandt and Xiaodong Zhu (2010).

other words, the result of excessive capital deepening is to hinder the improvement of the whole economy's total factor productivity. However, this component of productivity is bound to be the source of more sustainable economic growth.

6.4 Total Factor Productivity

Many people believe that, a country's economy presents the trend of capital-labor ratio increasing on the whole along with the improvement of economic development level, which is related with the spread of a so-called "Hoffmann's Law". In the early 1930s, according to observations on early and middle periods of industrialization, German economist W. G. Hoffmann found that along with the advancement of industrialization, sectors producing capital goods (heavy industry) tended to grow faster and faster, compared with sectors producing consumer goods (light industry). The result was naturally that the whole economy's capital intensity became higher and higher.

This "Law" is also consistent with early economic growth theory. For example, the famous Harrod-Domar model assumes that the accumulation of physical capital is the only engine of economic growth. If we explain the different performances of countries' economic growth according to this theory, we will get the conclusion that countries of insufficient capital accumulation will eventually fall after countries with faster speeds of capital accumulation. As a result, the more developed countries, or those with better growth performances will have higher capital-labor ratio.

According to this logic, the traditional growth theory will have an implied policy recommendation for catch-up countries, the state should spare no effort to help society achieve a capital accumulation rate of critical minimum level, then use it as a material basis to improve labor productivity along with economic take-off and society's constant improvement of capital-labor ratio by itself.

However, there are a lot of classic cases in economic history rejecting the Harrod-Domar theoretical hypothesis and Hoffmann's empirical evidence. For example, the Soviet Union during the period of planned economy, as well as China and India which started industrialization in the 1950s were all countries clearly putting forward the implementation of heavy industry's prior development strategy. However, the results of this industrialization strategy's implementation all contradicted with this policy's original purpose. Until these three countries began a series of system reform, India was characterized by industrial development badly lagging behind, while Soviet Union and China manifested as having an abnormally high proportion of heavy industry with serious imbalance of industrial structure.

Robert Solow, the representative of neoclassical growth theory, started from the law of diminishing returns on capital and found that the only source of long-term economic growth was an element in economic growth which could not be explained by regular input of factors of production, namely the total factor productivity. However, this factor of productivity came from a series of improvements as technological progress, resource allocation and system innovation. In the mainstream

neoclassical growth studies, a large number of literatures conclude from the empirical perspective that total factor productivity can explain the difference of countries' growth performances to a large extent.

Economic developments of the Soviet Union before economic transformation and China before reform and opening up were not successful. For instance, total factor productivities of the Soviet Union after the 1970s and China during the whole period from 1957 to 1978 grew negatively. Researches show that during the period from 1958 to 1978, China's GDP annual growth rate was 3.9 %, among which capital and labor's contributions was 2.3 % and 2.1 % respectively, while total factor productivity offset inputs' contributions with its contribution rate to economic growth being minus 0.6 %.¹⁰

In fact, not only failure lessons of the planned economies and developing countries have proved that it is productivity rather than the accumulation of capital that is an inexhaustible source of economic growth, since developed countries also have rich positive and negative materials in this regard.

A negative material is Japanese economy after 1990. Japanese economist Fumio Hayashi and American economist Prescott found in their research of Japan's first "lost decade" that the reason of Japan's economic stagnation was neither enterprises' incapacity to get capital, nor the problems of financial system, which was in the end total factor productivity's poor performance. Yet the reason of total factor productivity's poor performance was that government subsidized enterprises of low efficiency and industries in decline, resulting in share of low-efficient enterprises being too high while investments conducive to improving productivity being reduced.¹¹

It is interesting that both Solow and Lewis's articles were published in the 1950s, and the former's theory has gained lasting fame, being the mainstream growth theory by far, while the latter's theory seems to be a flash in the pan, losing already the mainstream status.¹² However, neoclassical growth theory has not become the one and only way to prevent mistakes of economic policies. Except that policy choices have been influenced by many factors of time and place, the failure of neoclassical growth theory also lies in its theoretical model's characteristic of being not open.

Experiences of economic growth have shown that the performances and realization forms of countries' total factor productivity are in the end related with development stage, resource allocation mechanism and economic policies. While in neoclassical growth theory, many such important factors are classified into exogenous variables. A bigger insufficiency is that mainstream growth theory ignores developing countries' dual economic characteristic, while the characteristic of infinite labor supply can just break the law of diminishing returns on capital.

¹⁰ Dwight Perkins: *To View China's Economic Growth from Historic and International Perspective*, Economics (quarterly), the first volume of the 4th edition.

¹¹ Hayashi and Prescott (2002).

¹² Ranis (2004).

In this way, good theories have not produced the positive effect of influencing policies. Perhaps, the initiators of the neoclassical growth theory thought that productivity improvement should be concerned by enterprises, while economists' duty was just providing a most interpretative framework. Therefore, originally they were not going to guide policy-making.

This thinking has its rationality. Total factor productivity is a residual in statistics, which generally puts together growth sources which can not be explained by factor inputs. Therefore just understanding this theory does not make people know how to improve total factor productivity especially that this productivity improvement is actually the result of thousands of producers' competitions and mechanism for the survival of the fittest. No matter how keen government is to promote economic development, after all it can not offer any help.

Even so, if the mainstream theorists of growth can give Lewis's theory more respect and concern, and make their own theories more open and inclusive, they could have formed a growth theory analytical framework with more explanatory power. Using the characteristics of dual economic development and its transformation into market economy to enrich and replenish neoclassical growth theory, thus forming a more consistent analytical framework can not only help us to better understand the evolution Chinese economy has experienced and challenges it faces so as to avoid policy mistakes, but also can make contributions to mainstream growth theories with China's experiences and theories.

Singapore is a good example. We all know the famous dispute initiated by Krugman questioning the sustainability of Singapore's economic growth. In fact, the result of empirical researches circling around this dispute is quite different, which makes people doubt whether the useful concept of total factor productivity can become a standard confirmable in experience. However, this debate makes Singaporean leaders understand this quite academic economic concept, as well as its importance for the sustainability of economic growth, thus they set the national goal of improving total factor productivity by 2 % every year.¹³

Because of this, Singapore's later economic growth performance continues to attract attentions, becoming an innovation-driven model. For example, INSEAD ranked 125 countries for "global innovation index in 2011" worldwide from stabilized political and economic order, good education system, high input of research and development, effective infrastructure, degree of domestic market demand, abilities to transfer these advantages into innovation strength, and other aspects. Singapore was among the top ten, far ahead of Japan.¹⁴

China's economic development so far can be seen as both a unique and successful experience, and an important component of Asian miracle. Other Asian countries and regions' economic development provide not only experiences of the few countries which have successfully stepped across the middle-income stage and become high-income economies in the world, but also negative examples of countries falling

¹³ Felipe (1997).

¹⁴ Zhang Xinghui (2011).

into the middle-income trap. In addition, there are warnings and lessons of high income countries falling into economic stagnation.

An advantage of backwardness that catch-up countries have in economic development is that they have quite a lot of successful experiences and failure lessons to refer to. Openly using all kinds of economic theories, dialectically summarizing various economic policies' advantages and disadvantages and profoundly understanding Chinese economy's particularity can help us to start the new engine of Chinese economy's sustainable growth on the changed stage of development.

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Chapter 7

Sustaining Demographic Dividend

Demographic dividend comes from the special properties of population structure; especially the age structure. This kind of properties can earn some additional advantages for economic growth. In the case of being simplified, we can see that dependency ratio of population is a highly generalized index, which can reflect advantages or disadvantages in aspects as labor supply, human capital accumulation, saving rate and etc. Therefore, we take the turning point of dependency ratio of population from growing to declining as a symbol of demographic dividend's disappearance.

It is true that we need to realize demographic dividend will eventually disappear, and long-term economic growth will need to find a more sustainable growth source in the end. However, if we can make an issue on the component factors of dependency ratio of population, namely to make the reduced number of working-age population more productive through a higher rate of employment and better human capital accumulation; or, to delay the aging process in a relatively longer time period through adjusting birth policy, we are undoubtedly making useful attempts to continue the demographic dividend.

7.1 Future Challenges of Employment

For many years, annual economic growth rate's "ensure eight", namely GDP growth rate set by government is not lower than 8 % seems to be a permanent rule. China suffered the strike of Asian financial crisis in 1998. Prime Minister Zhu Rongji at that time required the government to implement necessary policies to ensure growth rate no less than 8 %. In 2009, in the face of global financial crisis's strike on China's real economy, Wen Jiabao, Prime Minister of the State Council at that time also put forward the requirement of "ensure eight". The information Premier Wen got from relevant departments was that 24 million non-farm employments needed to be created every year to avoid serious unemployment problems.

A phenomenon worthy to be noted is since China entered the Tenth Five-Year Plan Period (2001–2005), economic growth rate expected by all previous Five-Year Plan were not high, for example, “Tenth Five-year plan” around 7 %, “Eleventh Five-year Plan” 7.5 %, and “Twelfth Five-year Plan” 7 %.

However, seen from the implementation processes of the Tenth and Eleventh Five-Year plans, the government still wanted to exceed this expected goal, which was reflected in the requirement of “ensure eight” specially put forward in certain years. However, growth rate expected in the “Twelfth Five-year Plan” was set according to a lower goal, and there was no hard-and-fast rule for “ensure eight” when encountering difficulties. For example, annual growth rate target in 2012 was 7.5 %.

We should say that central government’s this expectation for growth rate change is in accordance with economic laws. Before the “Twelfth Five-year Plan” period, China always had a higher potential growth rate, which was on the whole higher than the planned growth rate target. However, during the “Eleventh Five-year Plan” period, the trend of actual growth rate exceeding potential growth rate had showed up. While at the same time, starting from the “Twelfth Five-year Plan” period, potential growth rate had declined significantly. If economic growth continued at the previous actual growth rate, it would undoubtedly cause a big transcendence gap. In other words, economic growth target before that period still had room to approach potential growth ability, while growth rate target after that period had already been quite close to the latter (See Fig. 5.4).

Speaking of economic growth rate target expected by the central government in 2012, it is coincident that potential growth rate predicted for the same year was also 7.5 %, therefore, the ultimately achieved actual growth rate 7.8 % was still higher than potential growth rate and thus cyclical unemployment would not be caused. In fact, this year’s urban registered unemployment rate and investigated unemployment rate both remained at the same level with those of the previous year; 103 cities’ ratio of position number to that of job seekers on public employment-service market was higher than the previous year; 23 provinces, municipalities and autonomous regions nationwide raised the minimum wage standard, and seen from the 220 cities having done the above, nominal average increase in minimum wage was 14.4 %.

Change having more turning nature was that according to the data of National Bureau of Statistics, negative growth of working-age population aging from 15 to 59 appeared in 2012 for the first time, absolutely dropping down by 3.45 million. In fact, seen from the sixth population census conducted in 2010, decline of population at this age started from 2011, which is predicted to reduce 29.34 million people during the period from 2010 to 2020. We could take this as the decline of China’s labor supply. At the same time, economic growth will remain its strong demand for labor.

For example, during the decade from 2001 to 2011, urban employment including urban workers and rural migrant workers increased about 115 million in total. We can take this amount and its change as labor demand. Seen from the changing trend of supply and demand, even if labor demand decreases by half for the next 10 years, it will still be far bigger than labor supply, which is determined by working-age population.

For a long time, we are constantly told that, large amount of population and workforce is China's biggest national condition, and China's labor market will be in the state of supply bigger than demand for a long time. To a certain extent, this emphasis is meant to remind government and society not to ignore the prioritized status of employment. Within a certain period of time, in order to prevent neglect of employment problems, denying the change of supply and demand in labor market seems to be a white lie. However, taking the year 2012 as the turning point, this national condition and state has changed fundamentally, not being influenced by people's will. Do we have nothing to worry about for China's employment problem since then? This is actually a continuation of the previous logic.

We only need to look at a simple phenomenon to find that this thinking above related with policy does not make sense logically. That is, for a long time, speaking of employment's status in government policy priorities' order, it is much higher in developed countries of market economy (which are in a normal state of labor shortage) than in China (which has an infinite labor supply). For example, in quite a long time, central banks of western countries mostly put "high employment" first among basic goals of monetary policy, while other goals are economic growth, price, interest rate, financial market and foreign exchange market stabilities. However, for a long time, employment is not reflected in China's macroeconomic policy goals.

However, since the twentieth century, China's macroeconomic policies' focus on employment has taken a path contrary to many western countries. For a long time, mature market economy's macroeconomic policy goals have long been fixed on employment, while developing countries focus on promoting economic growth, thus bringing more employment opportunities through creating more job positions.

However, due to the decline of Keynesianism and the rise of monetarism, over the past 30 years, no matter in developed countries or in developing countries, this macroeconomic policy tradition has undergone a huge change, becoming more and more simply focused on price stability, while some countries even have accepted inflation targeting. This is taken as a principle of the "Washington Consensus" in many countries having encountered debt crisis, which is embodied in the conditions for getting loans from International Monetary Fund and World Bank.

Assumptions this policy goals' deviation based on is that as long as price stability is achieved, economic growth and full employment will naturally be reached as results. However, this single macroeconomic policy goal is proved to be based on a false assumption, which in fact is that full employment and economic growth can be reached automatically after price reaches stability. Developed countries and developing countries' experiences show that such a policy shift has led to bad consequences, whose harm to developing countries is especially obvious.¹

At the same time, in order to deal with the serious situation of employment in the late 1990s and safeguard people's basic livelihood, Chinese government started to implement a proactive employment policy and launch a series of policy measures promoting employment and re-employment. In 2002, the 16th CPC National Congress Report puts forward to implement long-term strategies and policies to

¹Nayyar (2011).

promote employment, and list promoting economic growth, increasing employment, stabilizing prices and maintaining balance of international payments as the main targets of macroeconomic regulation and control. Central government's statement for employment has been gradually improved to the implementation of developing employment first strategy from the demand of expanding employment expansion be put onto a more prominent status in economic and social development. It is with this proactive employment policy which pays great attentions to employment that China can successively pass Lewis turning point and the turning point of demographic dividend's disappearance in a relatively short period of time, and realize the transcendence of economic development stages.

However, we should see that in different economic development stages, employment problems do not have the same nature, thus the type of policy should also change. China's economy started to change gradually from a typical dual economic development process to neoclassical growth stage after transcending the Lewis turning point and losing the demographic dividend. Accordingly, labor market began to experience an accelerated transition from dual structure to neoclassical type, and employment challenges it faced became more and more structural and frictional rather than on the whole.

That is to say, at the same time of maintaining moderate economic growth to create job positions, responding to structural unemployment problems produced by the mismatch between industrial structure change and laborer skills, as well as laborers' frictional unemployment problems during the period when laborers are looking for jobs on job market become more and more the focus of employment policy. China's employment problems mainly focus on three groups, which are given universal attention by the Chinese society: migrant workers, urban workers with employment difficulties and college graduates. We can see the structural and frictional employment difficulty and natural unemployment problems from these three groups.

At present, official urban employment statistics mainly covers urban population, while most migrant workers are excluded. If we process the data and include migrant workers into them, then total urban employment population in 2011 was 4,300 million, 35 % of which were migrant workers having entered town for more than 6 months. Besides, 65 % of newly increased urban employment populations of the year were migrant workers. That is to say, migrant workers had been the main part of urban employment, and their increment would be bigger and bigger in the future.

Seen from 2011, migrant workers' average years of education were 9.6 years. This human capital situation makes them properly adapt to labor-intensive jobs in the secondary industry (which requires the laborer to have 9.1 years of education), as well as in the tertiary industry (which requires 9.6 years of education). However, the trend of China's future economy is slowdown of economic growth and acceleration of industrial structure adjustment. According to positions' requirements for human capital, which are capital-intensive jobs in the secondary industry 10.4 years and technology-intensive jobs in the tertiary industry 13.3 years, migrant workers' levels of education are not enough to support them to change for the new jobs.

After experiencing Lewis Turning Point and labor shortage phenomenon, under the condition of ordinary workers' salaries increasing very quickly, it seems that

new generation of migrant workers who were born after 1980s have never experienced the difficulty of employment, more and more unwilling to enter high school after graduating from junior middle school, while their high turnover rate means that they have given up a lot of on-the-job training opportunities. More seriously, many rural adolescents are even eager to go out to work before completing compulsory education. However, this golden period of labor market will not sustain for a long time. Those migrant workers, whose human capitals can not satisfy future labor market's demand for skills, will encounter the perplexity of structural unemployment.

Traditionally, "Come and Go" labor migration mode is a means of solving rural migrant workers' unemployment problems. However, labor migration becomes more and more one-way, thus this means will no longer work in the future. In 2011, new generation of migrant workers have accounted for 61 % of migrant workers in total. Among them, 33 % have lived in towns and cities rather than in rural areas before the age of 16 and 38 % went to primary schools in towns and cities. We can say that most of them never have farming experiences, not to mention the intention to return to the rural area to be a farmer. Besides, as the way of agricultural production depends more and more on labor-saving technical change, thus agriculture is no longer the reservoir for labor force surplus.

We can see that the fundamental way to prevent migrant workers to face employment risk is to improve their human capital. Since migrant workers is a group who is updated constantly by new growing labor forces, creating good system conditions and making new growing labors receive ordinary education and vocational education as much as possible before entering labor market should be the key point of policy response.

Contrary to the situation of migrant workers, urban laborers group having permanent urban residential registration has shown a certain degree of aging trend. In fact, if there is no mass flow-in of rural labors, urban labor forces' ages will be much older than actually shown. According to the data of the sixth census, for example, among the urban permanent working age population aged 15–59 in 2010, the proportion of age group from 20 to 29 is 35.0 % for migrant population and 21.6 % for local registered population and the proportion of age group from 50 to 59 is 7.2 % for migrant population and 19.3 % for local registered population (See Fig. 7.1).

Therefore, among labor forces with urban registered permanent residence, there is a larger proportion of population whose human capital accumulations are obviously insufficient, representing as age being older and level of education being lower, thus it is difficult for them to adapt to industrial structure adjustment's higher demand for skills. These laborers are recognized by the government as urban labors having employment difficulty, being taken as the targeted population for key support. Urban workers' this demographic constitution determines that there is always a relatively stable group, who are often in the state of structural and frictional unemployment, forming a typical natural unemployment.

Estimates show that since 2000, China's urban natural unemployment rate is about 4.0–4.1 %, which is in accordance with the registered urban unemployment rate over the years (See Fig. 7.2). As is well-known to all, statistical object of the

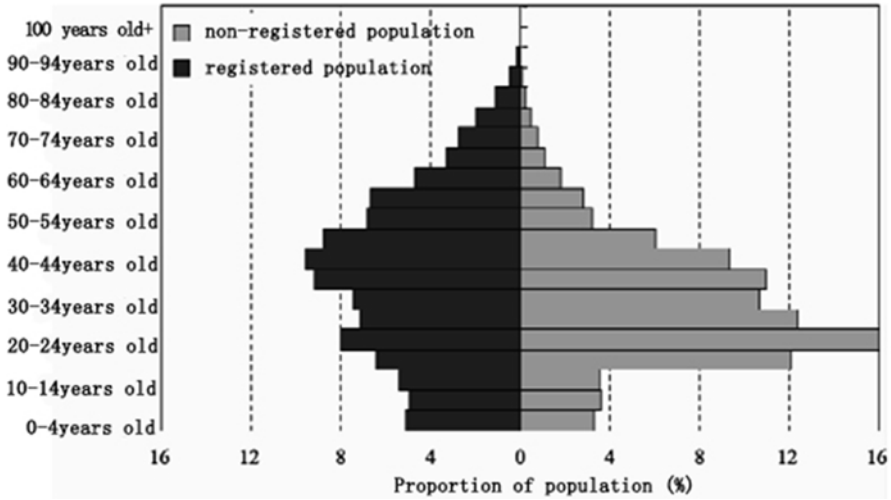


Fig. 7.1 Age constitution of urban permanent working age population (Source from: Census Data in 2010, edited by Census Office of the State Council and Population and Employment Statistics Division of National Bureau of Statistics, China Statistical Publishing House, 2012)

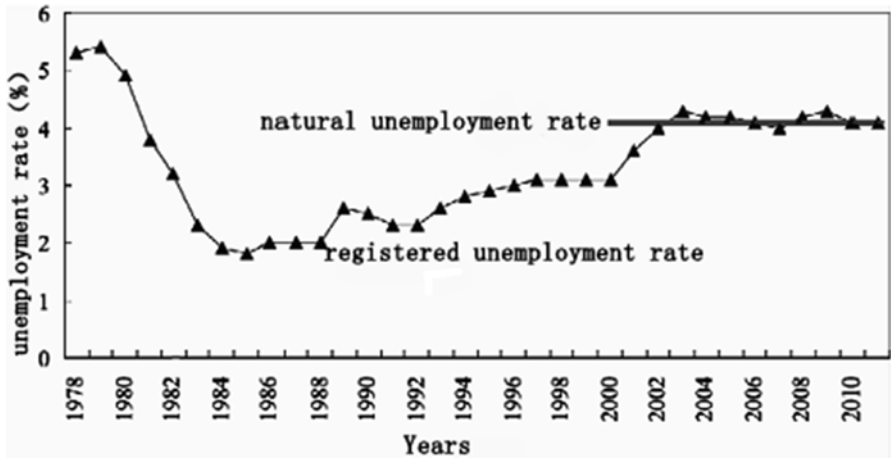


Fig. 7.2 Migrant workers bear the risk of cyclical unemployment (Source from: National Bureau of Statistics (2012), Du Yang and Lu Yang 2011)

registered urban unemployment rate is only urban residents with urban registered permanent residence, that is to say, local labors only bear the structural and frictional natural unemployment. Obviously, migrant workers become the only bearers of cyclical unemployment. Along with macro economy’s cyclical fluctuations, the phenomenon of migrant workers returning home because of cyclical oversupply and

being in short supply during the other time alternately and repeatedly can prove this conclusion.

Speaking of natural unemployment risk faced by urban workers, we have to mention a feature of this group's human capital constitution. Due to the significant achievements of China's education development since 1990s, which have rapidly added new growing labor forces' years of education, China's working-age population's human capital distribution characteristics is that the older, the less years of education. Since urban laborers' ages are older, the group having insufficient human capital also accounts for a bigger proportion. Under the condition of industrial structure changing very rapidly, quite a large proportion of laborers have difficulties to meet labor market's requirement for skills, thus easily falling into the state of structural unemployment.

University graduates' employment difficulty along with their wages' convergence to low-end laborers has more and more become a phenomenon attracting a wide range of social concern, and become the basis for some skeptics to criticize enrollment expansion of colleges and universities. We should say that changes happening after the enrollment expansion of colleges and universities are dramatic and fundamental, making people fail to fully understand and properly respond. This fundamental change is that China has entered the stage of higher education popularization in a very short time.

In 1973, an American scholar Martin Trow proposed the theory of higher education popularization, pointing out that higher education gross enrollment rate within 15 % was the stage of elite education; from 15 to 50 % was the stage of higher education popularization; more than 50 % was the stage of mass popularization of higher education. According to this theory, in 2002, namely the third year of enrollment expansion, China entered the stage of higher education popularization. After higher education entered the popularization stage, some properties for university graduates' employment were gradually revealed. Public opinions and policies will be misled if these properties are not recognized.

Labor economics research shows that the higher level of education degree, especially after receiving the education of bachelor's degree or above, the longer it will be needed for job seekers to realize their match with the labor market. That is to say, if university graduates want to find ideal jobs, they need to spend more job-seeking and conversion time. Therefore, we can not get the correct conclusion about this group's human capital advantage simply by university graduates' employment rate after a few months of their graduation, as well as their starting salary level.

As a matter of fact, after experiencing a relatively longer time of job-seeking and realizing employment for the first time, laborers having a high degree of education will still be in the process of job-seeking. In addition, superior human capital condition also gives them more opportunities for career development, thus eventually being at an advantageous position in labor market.

People will ask what labor market and government's active employment policies can really do for the employment of college graduates. It is undoubtedly that labor market signals are very important for leading the behaviors of each party concerned. Imagine if the phenomenon of unemployment and laid-off didn't appear in the late

1990s, which motivated laborers to change employment expectations and skills, and realize employment and re-employment through labor market, the allocation of urban labor resources would not be established on the basis of market mechanism till now. The employment of college graduates is the same: a certain degree of structural unemployment is necessary for this laborer group's adjustments of expectation and job-seeking behavior.

For example, labor market's supply and demand condition in 2013 shows a seemingly contradictory phenomenon. On one hand, laborers having college and university degrees are not as popular as laborers having degrees of vocational high school, technical training school and high school. In fact, the condition of college graduates' employment is worse than that of junior high school graduates. On the other hand, labor market has a very strong demand for laborers holding senior professional qualification certificates or senior professional technical positions, while laborers only holding junior vocational qualification certificates or junior professional technical positions are relatively unpopular.²

This undoubtedly means that laborer's human capital is not useless, while the degree of education shown by education background can not be translated into employment skills required by labor market. This kind of signal proposed to students the question of how to consist education background with skills. At the same time, it also shows that labor market signals are necessary for government to perform its functions. Structural employment difficulties faced by college graduates indeed need the help from labor market functions and employment policies, but problems as improper major and curriculum setup, and low teaching quality may also exacerbate structural employment difficulties faced by college graduates, putting forward many researching topics for reforming and adjusting higher education system. All of these put forward new challenges for government's active employment policies.

However, no matter the phenomenon of university graduates' employment difficulty, or the signals for this community's employment conditions released by labor market, obviously neither of them can become the reason of slowing down the development of higher education. Experiences and lessons from each country's economic development can not support the statement that education may be excessive.

7.2 Will Education Be Excessive?

Since the 1980s, China's education development has realized remarkable achievements, having not only consolidated previous education achievements, but also realized education's great leap through popularization of 9-year compulsory education and expansion of higher education enrollment. Education development is converted

²Refer to Monitoring Center of China's Human Resources Market Information (2013).

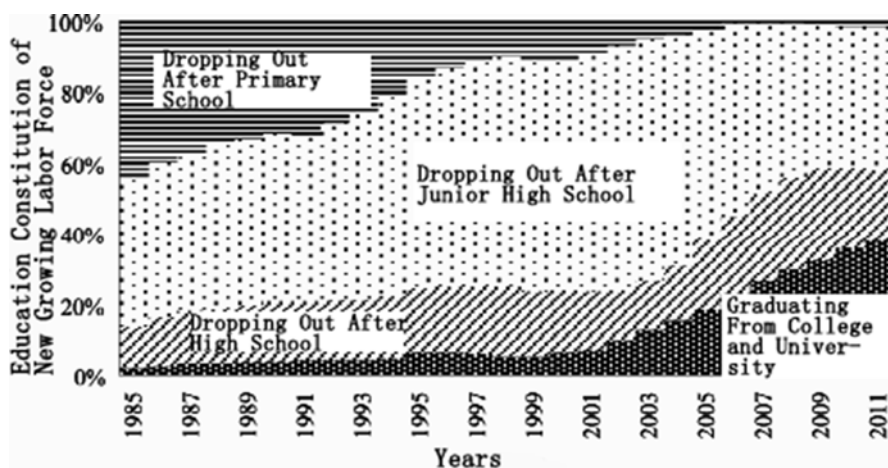


Fig. 7.3 Human capital constitution of new growing labor force (Source from: National Bureau of Statistics [2012](#))

to laborer's human capital, which becomes an important contributing factor to the miracle of China's economic growth.

We can roughly regard teenagers graduating from schools at all levels who would not continue their education as new growing labor force of that education level. Among the new growing labor forces, the proportion of teenagers only having primary school education dropped significantly after the middle 1980s; accordingly, the proportion of junior high school graduates was greatly improved, especially after 1990s; yet since the early twenty-first century, the proportion of college graduates has increased rapidly, thus the proportion of high school graduates has also improved. This changing trend demonstrates that new-added human capital has been greatly increased with the reduction of new-added working age population number (See Fig. 7.3).

The good trend of China's education development and human capital accumulation will not necessarily and naturally continue. Education development is mainly benefited from two prominent policy effects till today, namely the positive effects of popularizing 9 years of compulsory education and expanding enrollment of higher learning institutions. However, unsustainability of education development is presented as new challenges faced by these two policies themselves on one hand, and policy consensus on how to realize the new breakthrough of education development that should be reached but has not yet been made on the other hand.

Government efforts to popularize compulsory education were officially launched in 1985. Although due to some negative factors, such as excessive rural debt was caused in order to meet targets, thus debates between different views once appeared, in the end, this policy was proved to be far-sighted, which had significantly positive effect on China's human capital accumulation. However, since elementary school and junior high school enrollment rates are already very high at present, the trend of diminishing policy effect has been shown, which is, compulsory education can no

longer make great contributions to significantly improving population's years of education on the whole.

College enrollment expansion began in 1999, whose original intention was delaying teenagers' time of entering labor market, thus alleviating employment pressure at that time. Unexpected effect was China's higher education entered into the stage of popularization since then. The number of college graduates within a year jumped from 0.85 million in 1999 to 6.8 million in 2012. Enrollment expansion of colleges and universities also has a predictable side effect, which is driving the improvement of the high school enrollment rate, which together with the former has increased the new growing labor force's years of the education.

As appeared in many other countries and regions, higher education popularization is often accompanied by phenomena as graduates' employment difficulty and relatively decreased wages, which has also happened in China. This leads to the formation of a criticism wave assuming that the expansion has some blindness; therefore, policies for it have begun to become cautious, and enrollment growth after 2008 has slowed down.

In condition that diminishing marginal effect of those policies above has appeared, people will hope state's financial spending on education to increase significantly. The target that state's financial education spending should reach the share of 4 % in GDP, being put forward by "China's Education Reform and Development Outline" enacted in 1993, was not finally realized until 2012. However, is this number enough to solve the problem of Chinese education's sustainable development? To answer this question, we need first to clarify which factors have already emerged and may hinder Chinese education's further development in the future.

The concern that education may develop excessively exists in many people's minds. Of course, it is because of the appearance of university graduates' employment difficulty in labor market that people make this speculation: is it that we should not expand higher education in such a large scale? From the perspective of economics, determining whether the enrollment expansion of colleges and universities is blind or answering the question that mass popularization process over the past more than 10 years leads to the problem of excessive higher education's according to human capital return rate is simple and straightforward. Whether using data before or after the enrollment expansion, econometric studies all have shown that higher education has higher return rate than lower education stage.

In these studies, the conclusions using data after enrollment expansion is more meaningful. This is because before enrollment expansion, the proportion of university graduates was very low and "scarcity is precious", thus it was reasonable that they got higher returns in labor market; and if higher education still gets higher return rate after the enrollment expansion, it means that this expansion conforms to labor market demand. For example, Li Hongbin found that after college expansion in 1999, the scale that average wage of employees having a junior college diploma or above is higher than high school graduate employees continues to improve, reaching the height of 49 % in 2009.³

³Li Hongbin (2012).

It is also necessary for us to jump out of this utilitarian consideration of immediate return rate and answer this question from a longer perspective: Why do we need higher education's rapid development. The former British Prime Minister Margaret Thatcher once said: we don't need to worry about China, because it is a country which can only produce washing machines and refrigerators, but cannot create ideas. For some people's wide quotation of these words, others disagree and think this statement does not conform to the reality that China has splendid culture heritage and continuously makes prosperous achievements in culture during the period of reform and opening up.

Indeed, we should never take a self-humiliated or nihilistic attitude to treat achievements made by ourselves and cultural heritage created by our ancestors. Besides, the opening ceremony of Beijing Olympic Games stunned the world, Shanghai high school students won the first place in international student evaluation program, and Chinese writer Mo Yan won the Nobel Prize in Literature, all these performances only show a drop in the ocean of Chinese nation's creativity, which is certainly worth being proud of. However, we might as well consider what kind of attitude we should adopt to treat criticisms as Ms. Thatcher's from the following perspectives.

First, Ms. Thatcher criticized China for not being able to create "ideas", whose original intention means lack of creativity. It not only refers to culture, but also includes natural science, engineering technology, production technology, humanities, social sciences, arts and culture, and other fields; further more, it means creativity-related human capital. For example, former Singaporean Prime Minister Lee Kuan Yew said more directly. He asserted that China would finally exceed the United States in total GDP, but its creativity would never match with the latter, because Chinese culture does not allow free exchange and competition between ideas.

Second, the Chinese proverb "hear all parties" should also include foreigners. Besides, in terms of international comparison, foreigners' impressions are also a frame of reference, even when they are superficial. Being contemptuous of anything from foreign countries does not conform to the mentality China should have as a big power. Singapore is a small country, when 20 years ago some famous economists criticized together its economic growth model, assuming that its rapid economic growth was only the result of factors of production's accumulation, while the improvement of total factor productivity driven by technological progress was lacking, Singaporean leaders also felt losing face. However, they still adopted the attitude of "rather believing it", and set up national goals for the improvement of total factor productivity. Over the years, Singapore has been among the first several countries in the ranking of global competitiveness index, whose ranking rises year after year, which should be related with this attitude of hearing all parties.

Third, the famous "Asking of Qian Xuesen" shows that lack of creativity due to institutional constraints is indeed China's reality. Famous scientist Qian Xuesen were still thinking in his sickbed until before he passed away that why couldn't our universities be run according to the mode of cultivating talents of science and technology inventions, why didn't we have our own unique innovations, and why

couldn't we cultivate out outstanding talents. An American centenarian, Nobel prize-winner economist Ronald Coase provided his answer for "Asking of Qian Xuesen", who thought that the reason lied in China's lack of an idea market.

Market here represents a stage or platform, on which idea or creativity is bred, born, fed, motivated and grown. Therefore obviously, universities' healthy and rapid development is the premise to produce such a market. China's university system has many problems, which need to be solved through reforms, but should never be the reason for giving up this system for fear of risks.

Preparedness ensures success. In order to prevent the true happening of higher education's excess, a good way is to gradually make families to share more university education spending from now on. An important finding in education economics is if we rank educations' social returns from high to low, they are successively pre-school education, basic education, general education on the higher stage, vocational education and training. Obviously, in fields where private return is high, family and personal investments should be more guided, while in fields where social return is high, government payment is more suitable.

Speaking of government payment, the problem we are facing is when public education investment reaches 4 % of GDP, namely calculated according to total GDP in 2012, under the condition that public education investment exceeds more than 2 trillion Yuan, how should this valuable resource being allocated to achieve the maximum efficiency?

Let's first look at a possible unreasonable situation. Chinese government puts forward that government fiscal spending on education must reach 4 % of GDP starting from 2012. Imagine that, what does it mean if this proportion of public spending on education is implemented on each level of government? Compare Xicheng District in Beijing (where headquarters of many big banks are located, thus having gathered a large proportion of China's national GDP) with Liu PanShui (the poorest city in less developed Guizhou province) for per capita public education spending enjoyed by permanent residents, the former is at least a dozen times of the latter. Whether such public investment differences can be both fair and efficient, the answer should be self-evident.

Let's go back to the basic theories in economics. An inexhaustible source of economic growth is the improvement of productivity, and an important means to improve productivity is allocating resources in the most efficient way. Winner of Nobel Prize in Economics James Heckman pointed out in 2003 that there were imbalance problems in China's investment between physical capital and human capital, as well as spending on education between different regions, which lacks fairness and does not conform to the principle of efficiency.

As we have discussed, after demographic dividend disappears, infinite labor supply is no longer the characteristic of China's economic development. Accordingly, the phenomenon of diminishing returns on capital has intensified. The Good news is while return on material capital diminishes, at the same time, human capital has shown more and more an increasing trend on its return. Therefore, social resources transfer more from the field of material investment to human capital investment,

inevitably bringing huge resource allocation efficiency and supporting Chinese economy's sustainable growth.

Seen from a long-term point of view, investment on human capital has the characteristics of diminishing returns; however, there also exist differences of efficiency on how to allocate limited education resources here and now among various levels, areas and regions. For example, equal amount of public spending on education has significantly less investment efficiency in Beijing Xicheng District than being allocated to Liu PanShui. Therefore, according to the basic principles of resource allocation and starting from the problems faced by educations of all types and at all levels, we put forward the following policy suggestions for the development of Chinese education.

First of all, compulsory education is the key stage to lay a solid foundation for lifelong learning and form a equal starting line between urban and rural areas and between children from families of different incomes, thus it is the government that should give full inputs of public resources. It is worth noting that, since preschool education has the highest social returns, which means government payment for it is in accordance with the law of education and the principle of benefiting the whole society, thus it should be gradually incorporated into compulsory education.

Since China stepped across the Lewis Turning Point, job positions have increased, which have more robust demand for low-skilled labors. The phenomenon is quite serious that children from some families, especially those from poor rural families drop out from junior high school. Seen from the short-term interests of the family, this seems to be a rational choice, however, human capital losses will eventually be shared by society and family. Therefore, government should practically reduce the proportion of family spending in compulsory education stage, and consolidate and improve completion rate of compulsory education. Besides, through putting pre-school education into compulsory education to make rural and poor children not lose at the starting line also greatly helps to improve their completion rate in elementary school and junior high school stage, and increases their equal opportunities to continue education.

Second, greatly improve the level of high school enrolment and promote the popularization rate of higher education. High school enrolment and university enrolment promote each other, being cause and effect at the same time. When high school popularization rate is high, the size of population having the desire to go to universities is big, while more chances of entering universities also pose a greater incentive for students to enter high school. At present, government spending within budget is low for high school education, and the burden of family spending is too heavy. In addition of factors as high opportunity cost and low success rate of entering university through examinations, this education stage becomes the "bottleneck" of future education development. Therefore, starting from continuously and rapidly advancing higher education popularization, government should promote high school education free of charge as soon as possible. Relatively, higher education should further motivate society's enthusiasm for running non-government schools and family's enthusiasm for more input.

Finally, through the guidance of labor market, vigorously develop vocational education. China needs a group of teams formed by workers with high skills, which need to be cultivated by secondary and higher vocational educations. The proportion of school-age students receiving vocational education in countries from Europe and the United States is generally over 60 %, while that of countries as Germany and Switzerland is even as high as 70–80 %, all of which are significantly higher than that of China. China should intensify vocational education and vocational training starting from its long-term development's requirement for laborers' quality.

Due to that this type of education has the characteristic of high private return, whose labor market incentive is relatively sufficient, therefore, it should rely more on families and enterprises' investment enthusiasms, and government's input should be lower than that on ordinary high school. In addition, the channels between high school vocational education and vocational higher education and general higher education should be set up, and reforms of education system, teaching mode and teaching content should be sped up, so that students can have more choices to realize all-round development.

7.3 Dealing with “Getting Old Before Getting Rich”

In more than 30 years since China's reform, it has not only experienced the fastest economic growth, but also completed the transformation of population type from “high fertility rate, low mortality rate and high growth rate” to “low fertility rate, low mortality rate and low growth rate” with a speed faster than other countries and regions in the world. As early as in the 1990s, China's total fertility rate dropped below the replacement level of 2.1. According to the United Nations' estimation, in 2006 China's total fertility rate dropped to 1.4, not only lower than developing countries' average and the world's average, but also lower than the average level of developed countries.

As an inevitable outcome of demographic transition whose main power is the decline of birth rate, population aging degree will deepen, and for China, which has experienced the fastest demographic transition process, its aging speed is more outstanding. The proportion of population over 60 years old among the total rapidly increased from 8.0 % in 1980 to 9.7 % in 1990, 11.2 % in 2000 and 13.5 % in 2010.

However, only observing longitudinally from the time series is not enough to reveal the severity and particularity of China's aging process. If we compare China's aging degree with its economic development level, we can see a prominent characteristic that China has achieved a high aging degree on a lower income level, namely formed the so-called “getting old before getting rich” characteristic. In 2010, Chinese population over 60 years old accounted for 13.5 % of the whole population, population aged over 65 for 9.4 %, while these two proportions for the average of other developing countries excluding China were only 8.2 % and 5.7 % respectively (See Fig. 7.4).

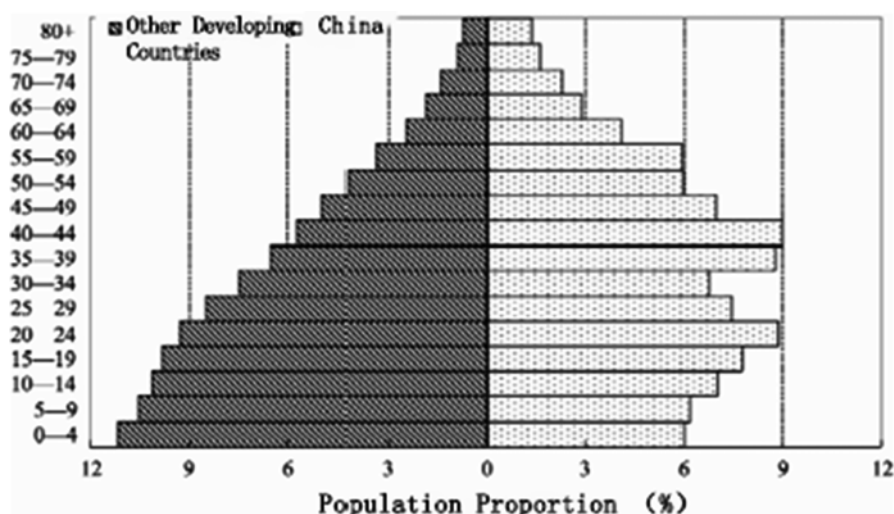


Fig. 7.4 China and other developing countries' population age structure (Sources from: United Nations, Department of Economic and Social Affairs, Population Division 2011)

Population aging is an irreversible process which will not be transferred by people's wills. In today's world, most developed countries have entered the high aging stage. The methods to deal with aging are often accompanied by the level of economic development. High-income countries in Europe and North America often have the following conditions to cope with the impact of aging. By contrast, China's conditions in relevant aspects have not been fully formed yet, thus it needs to “dance with” “getting old before getting rich”.

First of all, in developed countries, a series of systems have been matured to some corresponding extent, including retirement pension system, medical system, as well as other social welfare systems. These systems are sufficient for providing services needed by the elderly, such as support, care, medical treatment and even spiritual comfort and etc. Although developed countries have also encountered retirement pension system's sustainability problems, thus they have tried corresponding reforms, guarantee for the elderly are basically satisfied on the whole.

Due to that China is still at a lower stage of economic development, with its social security system started relatively late, its current social security is still not enough to cope with the challenge of population aging. For example, the proportion of local urban worker's participation in basic endowment insurance is 60.0 % and in basic medical treatment insurance is 52.8 %. However, for labor force transferred from rural areas working in cities, their proportions of participating in these two insurances are only 13.9 % and 16.7 % respectively. Besides, since China's pension insurance for urban workers still practices the “pay-as-you-go” system, with urban workers' individual account not being filled, while dependency ratio of population

risks rapidly, China's recessive debt problem and institutional sustainability problem should all be worried about.

Second, developed countries' economies have high labor productivities. The reason that population aging constructs burden for economy and society is that with the aging of population structure, dependency ratio of population becomes higher and higher, which means the proportion of dependent population not involved in production process becomes bigger, while the proportion of working age population engaged in productive activities becomes smaller, thus producing negative impacts on economic growth from aspects as labor supply, savings rate, and etc. This process is unchangeable; however, improvement of labor productivity can just offset this population ageing effect. Fortunately, for most countries, higher productivity and greater degree of population ageing are the results of higher level of economic development.

However, for China, which is "getting old before getting rich", it is not so lucky in this respect. According to Conference Board's research, although growing speed of China's labor productivity is faster than other countries in the world, its absolute level still lags behind till today. In 2010, GDP created by each Chinese employee (labor productivity) calculated according to purchasing power parity (PPP) is far below major developed countries, which only accounts for 17 % of the United States. Even compared with emerging economies, China's labor productivity is still significantly lower than that of Russia and Brazil, which is only slightly higher than that of Indonesia and India.⁴ If calculate GDP according to the exchange rate method we are used to, China's labor productivity level will be further lower compared with developed countries.

Third, labors in developed countries have higher human capital. One of the challenges of population aging is labor shortage; therefore, improving labor participation rate through adjusting labor market policies is naturally an appropriate means to deal with population aging. In developed countries, human capital accumulation has been long, relatively elderly workers also have more years of education, which is enough for them to increase employment time and expand labor supply.

But for China, whose education is developing very quickly but started relatively late, at the same time of new growing labors' education level increasing rapidly, its elderly labor group's education level is still very low. Even under the condition of labor shortage, it is difficult for this group which will soon retire to provide effective labor supplies.

If a man travelling light needs to leave his necessary baggage behind in order to cross a fast-flowing river, he will ultimately turn back to build the bridge and road to achieve the aim of crossing the river with his baggage. Just like him, the "getting old before getting rich" China which does not have the condition to cope with the challenge of population aging must learn lessons in system construction, productivity improvement and human capital accumulation to reach the other shore of well-off society under population ageing condition; there are almost no other shortcuts besides this one.

⁴The Conference Board (2011).

However, if we explore the factors which have caused China’s “getting old before getting rich”, we can still find some window of opportunity uniquely owned by China, which can also be counted as better late than never. Obviously, birth control policy which has been implemented for decades, especially the one-child policy since 1980s more or less makes China’s demographic transition occur faster than any other countries, with its population ageing coming earlier. Therefore, while people still have some fertility desire, adjusting birth policy as early as possible will be an effective measure for creating more balanced population structure in the future.

Signaled by the CPC Central Committee’s publication of *Open Letter to All Party and League Members on the Control of China’s Population Growth*, one-child policy has been implemented for more than 30 years. Many people call China’s birth policy as “one-child policy” for short, which actually is not accurate. We can summarize the situation of China’s birth policy until 2013 as follows.

Regions strictly implementing one-child policy include urban residents from cities throughout the nation and rural residents from six provinces, almost covering 35.9 % of the whole population; regions implementing “one and a half child policy, under which some families whose first child is a girl are allowed to give birth to a second child”, include rural residents from 19 provinces, covering 52.9 % of the whole population; regions implementing two children policy, meaning that rural residents can generally have two children, include five provinces’ rural areas, covering 9.6 % of the country’s whole population; regions adopting three children policy are for minority peasants and herdsmen in some areas, covering about 1.6 % of the population nationwide.

The Third Plenary Session of the Eighteenth CPC Central Committee Conference, which was held in November, 2013, put forward “to launch the policy that couples with one being from one-child family can have two children”, meaning that another important step was about to be taken on birth policy’s gradual adjustment. Since 2014, all Chinese provinces have implemented such a new regulation of family planning, fundamentally changing the desire of birth policy.

Starting from the present situation of policy implementation and according to the logic of reforming gradually, after the implementation of new policy, it is completely feasible to further open up a second-child policy adjustment comprehensively. According to the simulation, under ideal conditions, first of all, we can delay the starting time of population’s negative growth from 2022 to 2045 in the case that population slowly increase in total, with predicted population peak being 1.5 billion; second, we can make the number of working-age population aged from 15 to 59 rise again after more than 10 years, and make the time of its falling again relatively late with decreasing speed slower. Compared with the situation of policy unchanged, this scheme can make working-age population increase 38 million in 2030 and 170 million in 2050 additionally; third, we can slow down population aging speed. Compared with the situation of policy unchanged, the proportion of people over 60 years old can decrease 2.5 percentage points in 2030 and 7.5 percentage points in 2050.⁵

⁵ China Development Research Foundation (2012).

Long-term implemented family planning policy not only has produced policy rigidity, but also formed thinking set, which makes decision-making departments and even the social sectors from all walks of life have a kind of concern, worrying that once policy adjustment starts, the phenomenon of birth out of control will soon appear. In fact, official and academic circles also attempt to explore how strong people's willingness to breed is, in other words, in making policies for policy evaluation or policy adjustment, people want to know that whether the present low fertility rate is caused by policy constraints, or by economic and social development.

Research in local area has found that, under hypothetical condition of not being restricted by policy, a couple's expected number of children on average are about 1.7. To be specific, fertility intention survey conducted in 1997, 2001 and 2006 respectively showed that the expected number of children were 1.74, 1.70 and 1.73.⁶ This level is not only well below the replacement level of 2.1, but also significantly below the officially expected level of 1.8. Even if this fertility rate becomes true after policy adjustment, it can still not be counted as out of control. It is logical that the meaning of policy adjustment is people still have fertility intentions.

On the other hand, the key points of China's family planning policy's implementation should gradually shift. Specifically, in the first a few years of implementing "single child alone" second child policy and even the comprehensive opening up of two children birth policy, family planning control measures which previously work effectively can be applied to the situations of families having more than two children; in the following a few years, policy can be turned to focus on completing service system related with reproductive health; further, policy is bound to be transited to the orientation of voluntary birth; maybe it does not need a long time for the situation of China's population to become gradually convergence with other countries, and its policy objectives are likely to be transformed from birth limitation to birth encouragement.

However, in order to maintain the long-term sustainable development of China's economy, and complete its transition to a high-income stage, eventually we can not count on the reversal of demographic transition process; instead, we need to rely on the transformation of economic development pattern, on reforms to develop system dividend, and on exploring new growth sources. In later chapters, we will have an in-depth discussion on this.

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Chapter 8

Realization of Inclusive Growth

Passing the essential turning point of economic growth does not necessarily mean a healthy and fast economic growth, yet it does mean that the traditional growth pattern is coming to an end. To maintain a long-term sustainable growth, not only new sources of growth like human capital and total factor productivity etc. should be dug out, but more inclusive growth model should be developed. To achieve this requires the redistribution public policy; what's more, it demands for the transformation of economic growth mode, i.e., to raise the economic growth on the basis of providing the most equal opportunities for labor force participation, promoting the integration of urban and rural economic and social development and enhancing the coordination between industries.

8.1 To Improve Labor Force Participation Rate

Since 2011, negative growth in the working-age population has begun, which means if we want to avoid excessive decrease of labor force, the only way is to increase the labor force participation rate (hereinafter referred to as LFPR). Generally speaking, the LFPR in China is much higher than that in other places around the world. However, agriculture labor force in China accounts for a very high proportion, which results from the fact that the household contract system guarantee arable land for every farmer. That is, the comparatively high LFPR is actually generated from the special nature of agriculture. Once the agriculture factor is excluded, the situation will be somewhat different.

China's sixth census data shows that the LFPR of people over 16 years old is 70.8 %, and that of people between 16 and 64 is 77.3 %. If classified by the region type, the LFPRs of people over 16 years old in cities, towns and villages are respectively 62.2 %, 67.3 % and 77.6 %; and for people between 16 and 64, the rates are respectively 68.2 %, 73.3 % and 84.9 %. If we just take the non-agriculture labor into account, the rates will fall prominently. Take people at the age of 20–25 for

Age group	LFPR (agriculture included)			Non-agriculture LFPR		
	Total	Male	Female	Total	Male	Female
16—20	32.44	33.06	30.72	21.78	22.53	21.31
20—25	72.55	76.66	69.70	62.76	68.91	58.95
25—30	88.88	95.73	82.10	84.33	94.01	74.61
30—35	90.30	97.01	83.47	85.98	95.73	75.79
35—40	90.62	96.92	84.18	85.53	95.36	75.02
40—45	90.73	96.63	84.74	84.43	94.50	73.41
45—50	87.73	95.06	79.58	78.49	91.64	62.87
50—55	76.31	89.90	62.62	56.99	81.62	32.19
55—60	67.29	80.41	53.71	37.57	60.88	15.04
60—65	49.59	58.14	40.11	13.80	22.41	5.89

Fig. 8.1 Overall and non-agriculture LFPR of different age and gender in China (%) (Data source: calculated by the author with 1‰ data sample from the sixth census)

example, the LFPR is 72.6 % when applying for total labor, yet it declines to 62.8 % once the agriculture labor is eliminated (see Fig. 8.1).

According to the data from International Labor Organization, during the year of 1990–2011, the LFPR of people over 15 years old declined from 78.7 to 74.1 %. This change, however, is mainly the effect of education deepening, i.e., the improvement of compulsory education penetration, the increase of high school enrollment rate and the continuous enrollment expansion of college have led to the teenage school time extension, which naturally resulted in the LFPR decrease of this age group. For example, the LFPR of the age group 15–19 and 20–24 have fallen from 64.8 % and 91.2 % in 1990 to 36.2 % and 83.9 % in 2011. Overall in 2011, the LFPR in China was 74.1 %, which was 10 percentage points higher than the world average 64.1 %, 14.1 percentage points higher than the developed countries' average 60.0 % and much higher than other places outside East Asia.

Once talking about how to improve non-agriculture LFPR, there are two potential pathways people would usually refer to, i.e., to raise female labor force participation rate (Hereinafter referred to as FLFPR) and to extend the retirement age. Globally, the idea is undoubtedly in the right course and has its target as well. However, it is not that simple when considering the actual situation of China, so below is a more specific explanation to this problem.

Compared with the international level, the FLFPR in China is comparatively high. In 2011, the above-15-year-old FLFPR was 67.7 %, higher than the world's average 51.1 % and the developed countries' average 52.8 % and much higher than other developing countries' average. The LFPR equality between male and female in China is higher than the average of the world and the developed countries, and is much higher than that of other developing countries.

However, the tendency in China is that the LFPR of female declines faster than that of male, according to the data from International Labor Organization. Besides, to take both gender and age into consideration, there appears an unfavorable trend for female in labor market. For instance, according to the 2010 census data in Fig. 7.1, the LFPR of female over 40 years old dropped significantly faster than that of male. Recently, the new female entrants to the labor market suffer increasing discrimination in job hunting, which may be seen, in the future, that the FLFPR will decrease further. Therefore, to maintain the LFPR in China, we should strictly implement the relevant labor laws and regulations and try our best to eliminate the gender discrimination.

As for the retirement age, the specific situation in China has its history. China's labor market has a long history of institution segmentation. One is the segmentation of labor market between urban and rural areas, that is, farmers cannot receive relevant employment benefits as the urban employees. Another is the segmentation in urban labor market, for example, the treatment differs between people with cadre identity and those with worker identity. At present, the existing legal basis of retirement age are "*Interim Measures of State Council for the Administration of the Placement of the Sick, Elderly, and Disabled Cadres*" and "*Interim Measures of State Council for the Administration of the Retired and Quitted Workers*", which are both issued in 1978 yet apply respectively for cadres and workers. More specifically, for male, no matter cadres or workers, the retirement age is 60 years old; for female, situation differs, because those with cadre identity are supposed to retire at the age of 55, while those with worker identity have reached the retiring age when they are 50. Besides, the actual execution may deviate from the above rules because of the person's occupation, cadre ranking and physical condition.

Therefore, considering the current legal retirement age of employees in China and also the disparity between female and male, it seems logical to boost the LFPR through raising the retirement age and meanwhile eliminating the gender difference. In addition, owing to the economic and social development, the life expectancy of population in China has increased from 67.8 in 1982 to 73.5 in 2010, which makes healthy elder people valuable human resources and human capital.

In most developed countries, one of the policy instruments to explore the labor supply potential is to raise retirement age, i.e., to enhance the elder people's LFPR. For instance, about half of the countries in OECD (Organization for Economic Co-operation and Development) have raised or are planning to raise their legal retirement age. Of these countries, 18 aim at increasing the female retirement age while 14 focus on lifting the male retirement age. In 2010, the OECD countries' average male retirement age has reached 62.9 and female 61.8. If the current trend holds, the average retirement age of male and female in OECD countries will come to 65 in 2050, that is, based on the average level in 2010, the male retirement age will rise by nearly 2.5 years and female by 4.¹

Despite of the fact above, it is not without arguments to raise retirement age; moreover, situations can be much more complicated in the actual policy

¹ Organization for Economic Cooperation and Development (2011).

implementation than in the original intention. Events that have happened in Europe in recent years have shown that the public in some countries oppose the retirement age raising policy. Laborers and policymakers have different explanation for this conflict between public will and policy intention.

The public who object to the retirement age adjustment policy believe that the government is motivated to raise the retirement age in order to reduce the burden of pension payments. However, the explanation from the government side is that the laborers have been so long indulged in the over-generous pension insurance system that they are unwilling to lose the vested interest. With the accelerated process of population aging, the pension gap becomes a real or potential problem. Especially the pay-as-you-go mode, which has been formed when the working-age population was still high, it will eventually trap ourselves in straitened circumstances once the population age structure change. As a result, government really needs to consider the retirement age problem from the aspect of how to sustain the pension insurance system. This conflict between understanding and interest inevitably makes the retirement age adjustment a political policy, which is constrained by factors other than population aging.

There is also another official explanation that the purpose to postpone the retiring age is to improve the LFPR, so as to tackle the insufficiency of labor force supply brought by the population aging. However, this explanation cannot be widely acknowledged by the public in many European countries. Nevertheless, in order to deal with the possible severe shortage of labor force supply resulting from the group retirement of population born from 1947 to 1949, Japan commenced to implement the *Adjustment Law of Elder People's Employment and Settlement* which legally requires enterprises to postpone the elders working days. This practice significantly improved the employ environment of people between 60 and 64, increased their average income level and promoted the expansion of the domestic consumption demand in Japan.²

Yet a crucial problem worth consideration is that even though the retirement age can be legally raised, it does not mean the elder workers will, as a result, get employed. Even in developed countries, age discrimination in labor markets still exists, which naturally leads to the employment difficulty of elder people. What's more, a number of countries suffer from the pressure of high youth unemployment, so their governments even introduce some policies to encourage early retirement in order to make room for young people. The implementation of these policies has partly achieved the decrease of elder people's LFPR, but it hasn't contributed anything to reducing the youth unemployment.³ It shows that the implementation effect of one policy depends not on its original intention, but on whether the remedy suits the situation.

The situation of China differs prominently from those of the developed countries in the two important conditions, which declines postponing the retirement age as an option in the near future. The difference mostly stands in the overall characteristic

²The Bank of Tokyo-Mitsubishi UFJ (BTMU) (2012).

³Magnus (2009).

of labor force which is mainly measured with the benchmark of human capital. In China, the labor force community currently approaching retirement is the transition generation. For historical reasons, their human capital endowments put them at a competitive disadvantage in labor markets.

The feasibility of postponing retirement age to increase labor force supply is dependent on that the elder workers do not differ that much from young workers in education levels and that taking account of their working experience, they are very competitive in labor market. This is a fact in developed countries. For example, among the working-age population in America, people of 20 years old have education years of 12.6, while those of 60 years old have more of 13.7. However, the situation differs in China. At present, among the working-age population in China, the education level gets lower with age. For instance, people at 20 years old have 9 education years, but those at 60 years old just have 6 years, which widens the education level gap between China and America from 29 % at 20 years old to 56 % at 60 years old.

Under this circumstance, once the retirement age is raised, the elder workers will be put at a disadvantage. In western countries, the labor markets need an additional labor supply, so to extend the statutory retirement age can provide greater incentives for workers; however in China, this kind of policies only mean to narrow down the choices of laborers, and even put part of the elder workers in a very fragile situation: they cannot get employed and cannot get pension at the moment as well.

At the coming of Lewis Turning Point, labor shortage occurs continuously and the stress of employment amount has been obviously reduced; but the employment structural difficulty in labor supply stands out, i.e., the structural unemployment and frictional unemployment related to the laborer's professional skills and adaptabilities become increasingly prominent. Data shows that currently the demand for the elder workers in the labor market hasn't increased with the arrival of Lewis Turning Point.

Calculated according to the data from the 1 % population sampling survey in 2005, the LFPR of working-age population in both urban and rural areas has fallen since the people reached 45 years old. For example, the LFPR in cities and towns fell from 85.9 % at the age of 35–44 to 69.3 % at 45–54 years old, and further to 23.1 % at and over 55 years old. Obviously, the reason why the LFPR declined with age is that the elder workers lacked competitiveness in the labor markets.

It's thus clear that at least in the current situations of China, to simply extend the retirement age is not the only way to increase the LFPR of elder people. Perhaps we should not, in order to enlarge the overall size of labor force and reduce the burden of supporting the elder people, make an issue of the population currently approaching retirement age, but we should create conditions to cultivate the young generation today into workers with sufficient human capital, flexible adaptability to the industry structure adjustment and great capacity to extend their working days in the future.

According to the "Study and Formulate the Policy to Raise the Retirement Age in Progressive Steps" from the Third Plenary Session of the 18th CPC Central committee, China should choose a retirement age policy with differences and freedom

of choice and should recently focus on raising actual retirement age other than statutory retirement age. The framework of this policy should include the following contents: to develop education and training through legislation and strict enforcement and to gradually advance the broad labor market institutions and social insurance system arrangement.

The LFPR of great potential and with Chinese characteristics should be improved by the development of peasant workers' labor supply. The peasant workers do not have any urban residence permits and many of them are not covered by the social insurance, all of which means they, as the main labor supply for the cities and towns, do not have stable employment expectation and their non-agriculture LFPR is comparatively low if viewing from a life time.

The peasant workers' LFPR is suppressed by this kind of policies. One manifestation is that peasant workers are usually shocked by the periodical unemployment as the fluctuation of macro-economy and then many of them have to go back to their hometowns. Actually, every peasant worker will re-make his/her decision during the spring festival about whether to leave homes again. If he/she is still young and welcomed to the labor market, the decision is obvious. However, if the labor markets suffer the strikes like financial crisis, the elder peasant workers would probably decide not to go out any more.

Another manifestation is that some of them have retreated from urban labor markets when they are still at a comparatively young age, because they cannot enjoy the relevant social insurance and social assistance, especially they are not expected to live out their lives in cities. For example, according to the state statistical bureau, in 2011, 60.4 % of the peasant workers (including the returnees) who get employed in their own hometowns are over 40 years old, and only 18.2 % of those working outside their hometowns are over 40.

As demonstrated above, the non-agricultural LFPR of peasant workers is suppressed by the man-made residence policy. Therefore, to advance the urbanization cored with citizenization can undoubtedly stabilize the labor force supply, raise their actual LFPR and further produce positive results of raising the potential growth rate.

8.2 The True Meaning of Urbanization

The night light distribution on earth issued by the National Aeronautics and Space Administration shows that the light intensity in the night of current world depends not on the population density, but on the urbanization with wider meaning (see Fig. 8.2). You can see from the figure that China is of very low brightness, and you can even hardly see whether China is actually brighter than India. This night light distribution on earth, showing directly the urbanization level, is often used as a metaphor in which the light intensity stands for the economic development level or the brightness closely relates to the per capita GDP. Now



Fig. 8.2 The night light distribution on earth (Data source: http://www.thetimes.co.uk/tto/multi-media/archive/00363/VIDEO_EARTH_AT_NIGH_363137a.jpg)

let's use this distribution map to inspect the level and characteristics of urbanization in China.

It has been long since people pictured the urbanization where rural residents migrate to urban areas as a process of chasing “the light of cities”. The so-called light of cities represents not only the colorful cultural life in cities, but also more opportunities for employment and business establishment, and even the better and more sufficient public services. In 2012, the urbanization ratio, i.e., the percentage that the people living in cities for more than 6 months take in the overall population of China, has reached 53 %. This number, however, contains complicated meanings and needs further analysis.

The official statistics of urbanization ratio is derived according to the permanent resident population, that is, the population living in cities for over 6 months. This statistical caliber can easily make us think of the statistics concept – peasant worker, or migrant worker, i.e., people who are out of their hometown for over 6 months. At present, there are 160,000,000 migrant workers in China, 96 % of which have entered cities at all levels. It is clear that the urban population, which represents 53 % of people in China, actually includes peasant workers.

However, the peasant workers who are classified as urban permanent population do not actually have registered urban permanent residence. If counted according to the traditional statistical caliber, that is, the population with non-agricultural household registration, in 2011, they take only 35 % of the population in China. Then what is the essential difference between the urbanization measured with the

percentage of registered urban permanent residence and that with the urban permanent population? Apparently, these two vary greatly.

Household registration system is an institutional arrangement of planned economy, which emerged in 1950s with the purpose of preventing rural population from migrating to urban areas and segmenting the supply of social welfare in urban and rural areas. Now after more than 30 years' reforming since 1980s, the labor force flow and the population migration have already not been bound by this policy. Whereas, the household registration system still exists and is still tied with series of public services. Therefore, the peasant workers, who can be free to enter cities and get employed there, cannot equally enjoy the public services in cities because they don't have registered permanent residence; for example, the various basic social insurance coverage of peasant workers is significantly lower than that of registered permanent urban residents, the accompanying children of peasant workers are faced with difficulty in receiving compulsory education, the peasant workers cannot enjoy the subsistence allowance and that they have no chance to enjoy security housing etc.

According to the related law regulations, the five basic social insurances should be covered based on the employment identity other than the registered permanent residence; but the household registration system still hinders the peasant workers from receiving sufficient social insurance coverage. In 2011, the ratios of which the peasant workers covered by these basic social insurances take in the employees with urban household registration covered by these insurances are: social old age insurance 23.2 %, work-related injury insurance 47.9 %, basic medical insurance 31.6 %, unemployment insurance 20.1 % and maternity insurance 14.5 %.

Due to the insufficiency of enjoying basic public services, the peasant workers cannot fully and completely play their roles as consumers and laborers. First of all, the peasant workers cannot become regular consumers as other urban permanent residents and their consumption is incomplete, because they are full of worries, worries of their old age livings, sickness, unemployment, the education of their children and their unsteady income. Usually, the peasant workers would send back about 1/4 of their income to their rural home as a personal guarantee to balance their consumption.

Second, the peasant workers haven't become the actual citizens and they are just migrant workers who will come and go, which prevents them to fully function as an important labor force supply. For one thing, peasant workers are frequently impacted by the cyclical unemployment due to the macro-economy fluctuation and many of them have to return to their hometowns. For another, they will voluntarily withdraw from the urban labor force market when they are still at comparatively young age, for they cannot enjoy the related social insurance and social assistance, especially they are not expected to live out their lives in retirements in cities.

According to a survey of National Bureau of Statistics, in 2011, of the peasant workers who work in their own townships and towns, those over 40 years old take 60.4 %; while among peasant workers who work outside their hometowns, those over 40 years old take only 18.2 %. However, most of those who work in their hometowns used to work outside, and they withdraw to their hometown to take care of their families when they become aged.

In 2011, of all the employees in urban areas, peasant workers have represented 35.2 %, and among the new employees in urban areas in each year, peasant workers take an even higher proportion of 65.4 %. That is to say, though the peasant workers do not have registered permanent urban residence and they cannot equally enjoy the relevant basic public services, they have already become the main part of urban employment. However, not being registered permanent residents disables them to light themselves up. The number of urban permanent residents has increased by 160,000,000 because of peasant workers, but these new migrants still live in construction sites, crowded dormitories or their working places, so they cannot add the lights of cities. We could say this is the reason why cities in China do not really light up.

Obviously, the urbanization which regards the citizenization of peasant workers as its connotation is a typical opportunity window of promoting the economic growth through institutional reform. Homi Kharas, the world bank economist who initially put forward the concept of “Middle-Income Trap”, points out that it will take at least 10 years or more to see the reforming effects of developing capital markets, accelerating the innovation and development of high level education, improving the city management, building up a livable city and forming agglomeration effect, effective government by law, decentralization of authority and anti-corruption etc.⁴

Nevertheless, to view from the national conditions of China, there are indeed some reform areas which, if substantially carried forward, will receive immediate effect of boosting the economic growth. The household registration system reform is among these areas. To be specific, to push forward the citizenization of peasant workers by household registration system reform can achieve the effect of hitting three birds with one stone.

Nowadays, the economic growth in China is on the slowdown stage. The potential growth rate, measured with the supply of production factors like capital, labor force etc. and the speed of productivity improvement tends to decline. The laws of economics and the international experience both show that the right policy response to deal with economic growth slowdown is not to surmount the potential growth rate by stimulating the demand, but to improve the potential growth rate by digging out the institution potential. The household registration system revolution and the citizenization of peasant workers can not only help truly realize the urbanization in China by changing the requirements of economic development mode, but also produce prominent results of increasing the potential economic growth capacity.

As elaborated, to promote the further migration of rural labor force can improve the potential growth rate by increasing labor force supply and creating the efficiency improvement of resources reallocation, and it can also enlarge the peasant workers' consumption level by increasing the social insurance coverage. If the household registration system is reformed, a large portion of peasant workers' social insurance coverage rate will achieve the citizens' level. In that case, even their income is not raised, their consumption budget will increase by at least 1/3. It is predictable that the process of citizenization will inevitably further enhance the migrant workers' income stability, increase their LFPR and as a natural result, improve their income, which will significantly expand the residents' consumption demand.

⁴Kharas (2011).

Let's see what consumption demand can be created by the income effect brought by the citizenization of peasant workers. If peasant workers can make their budget for revenues and expenditures like residents with urban household registration, they can save 1/4 of the income that they previously sent back home, and the disposable income can be increased by 33.3 %, which elevates them from the "comparatively low income households" of the five urban residents income levels to the "lower middle income households". This elevation usually increases the consumption expenditure by 29.6 %.

To view from another perspective, if they no longer send back home 1/4 of their income, the total income of these 159,000,000 peasant workers would, counted according to the yearly average wage in 2011, reach RMB390,000,000, which is equal to 23.6 % of the national household consumption expenditure. Or rather, assume that peasant workers use the 1/4 income for consumption, the national household consumption expenditure would be improved by 6 %.

What's more, according to the input-output table of China, among the final national consumption expenditure, about 3/4 is urban household consumption expenditure and 1/4 is government consumption expenditure. The latter refers to the consumption expenditure which the government spends in providing public services to the whole society and the net expenditure that the government uses to cover the free-of-charge or lower-price goods and services provided to the residents. The urbanization cored with citizenization of peasant workers can, for one hand, significantly improve the household consumption level, for it provides more stable employment opportunities and more equal basic public services for the migrant workers; for another, it can reasonably enlarge the government consumption scale, because it strengthens the government responsibility of providing equal basic public services. These two effects will further manifest in the enlarging of national consumption demand, which will help stimulate the economic growth rebalance.

8.3 Agriculture Should Be Self-Supporting

The ownership of arable land per capita in China is enormously lower than the world average, so many will think that the agriculture in China innately lacks comparative advantage, and some study even estimates that the gap between the sown area of farm crops and the actual needs in China has reached 600 million *mu* (a unit of area, one *mu* is equal to 666.67 m²), which accounts for 20 % of the whole sown area. In consideration of this, some believe that to import more agricultural products, especially the food, is a strategy to make best use of the advantages and bypass the disadvantages. However, even though we can actually and reasonably lower the self-sufficiency level of agricultural products, we should not choose to weaken the self-supporting ability and over rely on the import; we should do it under the condition of self-sufficiency and utilize the comparative advantage strategy.

Therefore, China will eventually demand an agricultural production mode which can be self-reliant and also has market competitiveness. As to speak, all the

possibilities of the sustainable economic growth in future China are based on the agricultural modernization.

Since entering the twenty-first century, the agricultural policies and their effects are overall satisfactory and some are even remarkable. However, we cannot help asking whether it can, by continuing this policy tendency, maintain the agricultural development and further realize the agricultural modernization along with industrialization, informatization and urbanization. To answer this question, we need to divide the agriculture in China into three phases and examine what has been achieved and what challenges we are still faced with according to the task that need to be fulfilled in every phase.

In the first phase of the agriculture in China, its mission is to solve the food supply problem. This problem would run through the past, present and future, and became prominent in 1980s and 1990s. In this phase, the core task is to increase the supply of agricultural products, especially the food supply, by improving the incentive mechanism and the market environment and enhancing the productivity of scarce production factors. And this mission has been achieved since the rural economy reform in early 1980s.

During 1980–2011, the agricultural output per capita has increased: the food output per capita has improved by 30 %, the cotton output per capita by 75 %, the oil plants by 2.2 times, the red meat by 2.7 times, the aquatic products by 8.1 times and the milk by 21.7 times. This group of figures shows not only the achievement of food supply, but also the prominent effects of improving agricultural labor productivity successively by technical advance of efficient land using and labor-saving.

Looking into the process of agricultural mechanization, we can see the agricultural technology advance and its mode alteration and we can also observe the sensitive response of agriculture development to the change of production factors scarcity. That is, in the time shortly after the reform and opening-up, there were a great amount of surplus rural laborers, so the technology stress was not labor saving but the efficient use of land, which can be reflected in the relatively faster growth of small-size agricultural machinery. After that till recently, the labor shortage in agriculture has become prominent, thus the large-scale agricultural machinery started to develop rapidly, which shows the labor-saving characteristics of this technological change.

During 1978–1995, the average annual growth rates of the middle and large agricultural tractor and its accessory farm implements were respectively 1.1 % and -1.1 %; in the meantime, the average annual growth rates of the small-size agricultural tractor and its accessory farm implements have reached respectively 11.4 % and 11.7 %. However, from 1995 to 2011, the average annual growth rates of the middle and large agriculture tractor and its accessory farm implements were raised greatly to respectively 12.5 % and 13.0 %, while those of the small-size agriculture tractor and its accessory farm implements has dropped respectively to 4.7 % and 7.5 %.

Then in the second phase of agriculture in China, the mission is to deal with the rural income problem. This mission runs through time and it is not bound to a specific period as well. Since the reform and opening-up, the peasants' income has improved rapidly and significantly. However, there were twists and turns. In 1980s,

rural income raised comparatively fast, because the initial reform began in agriculture. Then along with the overall implementation of economy reform, the rural income growth lingered compared to the urban income. Since entering the twenty-first century, the central government has put forward the policies of industry re-feeding agriculture, urban areas supporting rural areas, providing more and taking less from agriculture or providing more and taking none from agriculture, so the peasant income again increased significantly and the urban-rural income gap has tend to narrow down.

The growth of rural income is mainly contributed by the prices rising of agricultural products, the surplus rural laborers turning to the wage income employment and the increasing of government investment on issues of agriculture, farmer and rural area. In 2011, the peasant worker population which has been stably transferred from agriculture to non-agriculture has reached 250,000,000, of which 160,000,000 have realized offsite migration and entered cities at all levels. The actual wage level of peasant workers in 2011 has increased by 1.5 times compared to that of 2003, the central budget expenditure on issues of agriculture, farmer and rural area has raised by nearly twice and the four direct subsidies to agricultural production have reached RMB140,600,000,000.

Whereas, it is still long way to go to fundamentally solve the peasant income problem. The reasons are as follows. For one thing, there is still a wide urban-rural income gap and the gap is wider than that in 1978 when the rural reform began. If calculated by constant prices, the ratio of the urban residents' income to the peasants' income in 1978 was 2.57; the ratio in 2009 became 2.67, reaching the peak; and the ratio in 2011 was 2.61, which is still high. Besides, the peasant income growth is mainly due to the proportion increase of wage income, the improvement of income level and the significant reduction in the proportion of farm income. During 1990–2011, the nominal net income of rural households' agricultural operation has raised from 456 *yuan* per capita to 2,520 *yuan*. Yet the proportion of agricultural operation income taking in the total household income reduced from 66.4 to 36.1 %.

Then the mission in the third phase of agriculture in China is to settle the food security problem. As time goes by, it becomes an increasingly prominent mission to establish agricultural production conditions and methods to secure the food supply by providing adequate incentive mechanism and incentive intensity and it is, as well, an inevitable issue after the first two phases. To maintain necessary self-sufficiency of food is undoubtedly an important part of food security strategy for China, a country with a large population; and the core requirements of food security strategy should be a sustainable agricultural production mode with solid foundation and complete incentives, in which the productivity can be continually promoted with the technology advance.

One prolonged discussion topic of the development economics is how a country can improve its agricultural productivity with the times after it has just gone through the Lewis turning point of labor shortage. The essence of dual economy is the surplus laborers in agriculture, thus the marginal productivity of agricultural labor is extremely low, near zero. At this time, the surplus rural laborers transferring from agriculture to meet the increasingly labor demand in non-agriculture would not

impact the agricultural output level. Generally, the first two phases of agriculture in China is overall correspondent to the typical development period of the dual economics.

Once the Lewis turning point is surpassed, it means that the marginal productivity of agricultural labor is still low, but it is above zero. At this point, if the productivity is not rising, the agriculture will be adversely affected by the continuous labor transfer. As such, some development economists give the Lewis turning point another name – food shortage point, i.e., if the productivity cannot be improved to adapt to the economic development phases, there would be problems like inflation caused by food shortage.⁵ China has finished its Lewis turning in 2004 and it has entered the third phase of agriculture development in the post Lewis turning point time and started to face with brand new and severe challenges.

In the whole process of economy reform initiated from agriculture, the productivity of agriculture in China, including the labor productivity, the land productivity or the total factor productivity, has improved prominently. However, in some specific historical period, for example, when China has reached the Lewis turning point, if comparing its agricultural labor productivity and land productivity with that of other countries or areas around the world, there is still huge gap to fill and great potential for improvement (see Fig. 8.3).



Fig. 8.3 The historical comparison of agricultural productivity (Data source: Zhao Wen 2012)

⁵Ranis and Fei (1961).

For example, we can learn from the previous research literature that Japan has reached its Lewis turning point in around 1960, South Korea and Taiwan of China in the early 1970s, while the mainland of China reached the turning point in 2004. The land productivity in mainland of China in 2003, as shown in the figure, fell much behind these East Asian economies. When comparing the agricultural productivity of China with the developed countries in 1960 the gap is even big. In conclusion, China should confront, as soon as possible, the new challenge of the third agricultural development phase.

In the phase of agricultural development focusing mainly on resolving the peasant income problem, it is necessary and effective to put forward the re-feeding policy. Viewing from the perspective of peasant income increasing, rural poverty alleviation and food security, if the government did not significantly raise the expenditure, the long-term liabilities on agricultural production condition from the planned economy period would not be compensated, the majority of peasants would be unable to get rid of poverty and thus it would be difficult to establish a base for the current agricultural development and the rural development. However, to view from long-term agricultural development, it cannot form a self-supporting agricultural production mode merely by compensation.

There is a long-lasting and far-reaching theory tendency, and the theory regards that the agriculture is an innately weak industry, which cannot, like other industries, grow by themselves in the market-oriented economy and that the price mechanism cannot produce enough incentives for agricultural production. According to this logic, a good policy to deal with issues of agriculture, farmer and rural area is to do their best to increase the governmental expenditure of agriculture. However, different ways that the government adopts to increase the agricultural input will produce different effects; what's more, it is not active enough to rely only on the government.

It is ubiquitous in the developed countries for their governments to subsidize agriculture, but the real sustainable and competitive agriculture should be established based on its own self-supporting ability. Indeed, China on the present developing stage still needs the policy of urban areas supporting rural areas and industry re-feeding agriculture. However, it becomes increasingly urgent to build up a production mode base for the future modern agriculture.

Agriculture, as an industry, has its vulnerability because the natural risks it is faced with and the long production cycle makes it special in the industrial insurance and the production fund raising. Nonetheless, the practice of the agricultural development in developed countries has shown that by reasonably combining the government and the market, the above mentioned specialties of agriculture would not prevent it from becoming a competitive and self-supporting industry.

Actually, the most prominent characteristic of agriculture is the continuous decline tendency in its share of the national economy. In China, the significant manifestation of this characteristic is that the value share of agricultural production declines faster than the labor share, which results in that the comparative productivity of agriculture is remarkably lower than that of non-agriculture. Well, the resolution is ready-made, that is, to realize the complete migration of agricultural labor and rural population according to the law of economic development, and meanwhile, to create a self-contained market mechanism and adequate price incentives.

First of all, compensations will never create necessary incentives. Take the now-days most popular direct subsidy for planting grain as an example. It is doomed that this subsidy form cannot produce the initiative of planting grain. Under the framework of WTO, it is prohibited to use government expenditure to impact the grain output, for it is a subsidy leading to unfair competition. In other words, the subsidy complying with WTO cannot stimulate the increasing of grain output.

Of course, this policy does not have other special distortion effects. In fact, under the condition of contracted land, the direct subsidy of planting grain is received by the contracted right owners other than the actual cultivators. However, as such a form of subsidy without incentive continues, the administration costs will increase and the rent-seeking behavior will emerge. In addition, to prevent Low grain price hurting the farmers, the country implements the policy of purchasing the bulk farm products at the guaranteed price. Under the circumstance of comparatively low and steady market prices, presently the bulk farm-products like cotton and grain etc. are all purchased at the guaranteed prices, which means the market mechanism is marginalized greatly in agriculture.

Secondly, it is not enough to forge a modernized agricultural production mode only by the government. The Eighteenth National Congress of the Communist Party of China proposed to facilitate the synchronous development of industrialization, informatization, urbanization and modernization of agriculture, which is summed up as the Four Synchronous Modernizations. The prerequisite of realizing the Four Synchronous Modernizations is to implement industrialization, informatization, urbanization and modernization of agriculture with the same incentive mechanism and intensity. When Theodore Schultz criticizes the thoughts that the peasants are irrational and that the agriculture is born a weak industry, he emphasizes the key to transform the traditional agriculture as such: the peasant will be able to turn sand into gold if given enough incentives.

Entering WTO means that we should take into consideration the agricultural markets and prices both in and outside China. The national and international interaction brings about challenges and opportunities. For one hand, the international agricultural products market sets an upper limit for the national agricultural product price. WTO forbids the trading protection of man-made maintaining the price of national agriculture higher than the international level, which will actually torment the price signal. For another, the price fluctuation in the international market can affect the stability of national market, and it can also be used as a price incentive to promote the peasants' income.

The key to make use of this incentive mechanism lies in conforming to the times, rather than going against the current. China used to passively respond to the fluctuation of international agricultural products market. When the agricultural product price of international market is higher than that of the country, the government would always closely restrain the agricultural export, thus the peasants never have a chance to make profit from the international price rising. While the price in the international market is comparatively low, to increase import and reduce the export would suppress the domestic agricultural price, thus will make the peasants final victims. However, these problems can be resolved in the modern market system by mechanism design and innovation.

Thirdly, other institutional arrangements related to the issues of agriculture, farmers and rural areas are inadequate to support the forming of modern agricultural production mode. For instance, there is a policy tendency in parallel with the thought regarding agriculture as an innately weak industry and it expects to maintain a migrant bird mode of the labor flow with the worries that the agriculture is declining and the rural economy and society is withering. This should be the policy root reason why no realization of urbanization cored with citizenization has been achieved.

Actually, a bashful urbanization cannot build a modern agricultural production mode on the base of price incentives and scale operation. Under the circumstance of lacking stable settlement, the peasants going out for work dare not transfer the management right of the contracted land and they are not willing to abandon the spare homestead, so even under the most strict land management system, the utilization rates of productive land and living land have both gone down.

For example, the total number of peasant workers in 2011 is 253,000,000. Of which 94,150,000 work in their hometowns on non-agriculture. To view from the nature of employment, these laborers have undoubtedly left the land; however, most of them are still managing agriculture at the same time, so the contracted land and homestead are retained beyond doubt. In the same year, the peasant workers, who have left their hometowns for over 6 months, have reached 159,000,000, of which 126,000,000 are members of families which belong to the registered permanent rural residents who do not have time to work on agricultural production, but they would not abandon their contracted land and homestead. Except that, there are 32,790,000 families who migrate from rural areas and totally separate themselves from rural life and agricultural production. However, in most cases, they do not abandon the contracted land and homestead under their names. Some of them transfer their contracted land to others, yet still enjoy the governmental subsidy of planting grain.

Thus it can be seen that the rural households or the households which work full-time or part-time on agriculture production or actually own the management right of the contracted land do not materially decrease along with the reduction of agricultural labor. This would result in that the agricultural operation scale cannot be enlarged in concert with the agricultural employment decrease, which hinders the improvement of agricultural labor productivity.

As a result of household contract system initiated in the early 1980s, the agricultural land in China is featured with scattered distribution and small scale of operation. Under the circumstance of total labor decreasing, if this state of land operation cannot be fundamentally changed, it would go against the mechanized farming and it cannot make sufficient use of the land by reducing land boundary and ridges. Besides, the comparatively small scale of operation prevents the producers from reacting actively to the price incentives and thus it is difficult to form specialized and professionalized operation.

Figure 8.4 shows a significant comparison between two tracts of arable lands in Chongming island of Shanghai. One of the lands has formed scale operation, and there are bar ribbings, less but more efficient kennels and less housing occupation. The other one is typical scattered and small-scale operation. Apart from the eco-

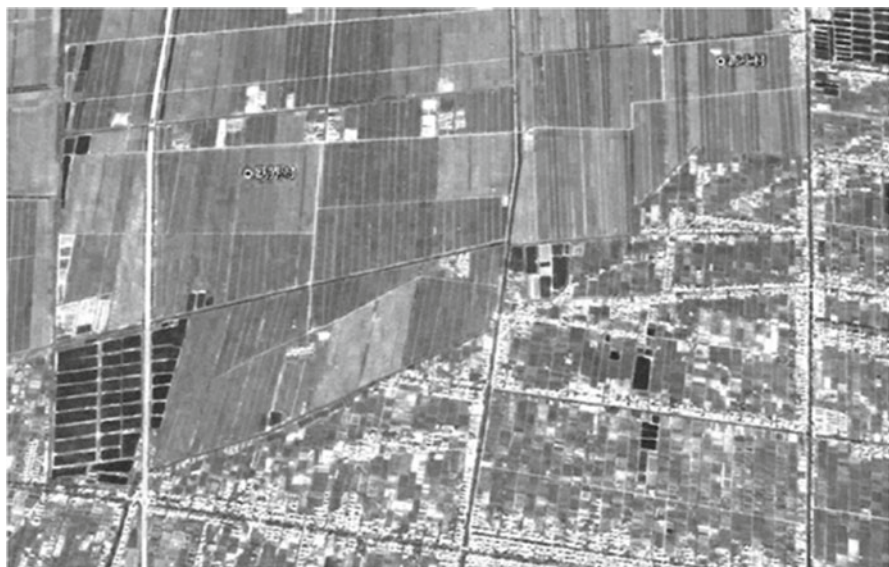


Fig. 8.4 The comparison of land concentration and fragmentation on Chongming Island of Shanghai (Data source: <http://maps.google.com/maps?11=317641353,121.566156&t=k>)

conomic principles related to scale economy and other factors, the land occupied by housing, ridges and kennels can tell its low efficiency as well.

On the tendency that many economists blindly emphasize the importance of agricultural operation scale, the Nobel economics laureate Theodore Schultz points out that there exists fake inseparability of production factors in agriculture, thus the land operation scale is not as important as people may consider.⁶ The inseparability of production factors refers to the usage of tractors should match the land operation scale. Assume that a set of joint harvesting equipment works on a small land, apparently it cannot be efficient. Therefore, the fake inseparability means the tractors can be large-scale or small-size and it can change according to the land scale. Furthermore, every operation unit, for example a household, owns a limited area of land, or we can purchase mechanization services, other than purchase a whole set of cultivation machinery, to settle the limited land problem.

This theory fits for and thus would help the agriculture in China for a long period of time. The economists and the rural policy researchers of China do not advocate over stress on scale operation for two reasons. One is that they worry the scale operation will provide excuses for local cadres and village collectives to sway the agricultural basic operation system of household management and hurt the incentive mechanism of agricultural production. Another worry lies in the possible phe-

⁶Schultz (1987).

nomenon that some laborers may have no land to cultivate due to enlarging of operation scale under the condition of surplus laborers.

So far, the agriculture development in China indeed verifies the hypothesis of fake inseparability of production factors. As the aforementioned, in the early stage, the small-size agricultural machinery increased rapidly, which is correspondent to the household operation conditions of small-scale land and surplus laborers; then in the next stage, large-scale agricultural machinery mushroomed and this is the mechanization way of labor-saving to suit the conditions of laborer shortage emerging and household purchasing machinery services.

When the agricultural development enters a new phase, to enlarge the land scale becomes increasingly urgent and it is now on the agenda, and it gets more and more important to improve agricultural productivity by the technology of saving land and labor because of the large amount of rural laborers and population movement from agriculture to cities at all levels. Based on the basic operation system of household management, we could explore a special way of land concentration to realize the agricultural modernization by further guaranteeing peasants' rights of utilizing and transferring contracted land, respecting their initiatives of institutional innovation.

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Chapter 9

Digging the Institutional Dividend

Transiting from the dual economic development with demographic dividend to the economic development with more and more neoclassic growth features, economic deceleration is quite natural, because in the latter period, economic growth is increasingly driven by technological advancement and productivity improvement. Thus, creating a series of necessary institutional conditions that haven't existed yet and promoting innovations by competition is an urgent task at the development transition. However, Chinese economy hasn't developed into a pure neoclassic growth pattern after all, which means there are still many traditional growth potentials to dig out.

No matter discovering new growth sources or digging out traditional growth sources, requirements are made on deepened reforms in order to gain institutional dividend for Chinese economy. According to China's previous experience and lectures, the core of the reform is to re-define the functional boundaries between government and market, and between society and enterprise.

9.1 Breaking Government Paradox

Nobel Prize winner in Economics Arthur Lewis was confused about a fact that a government failed maybe because it did too little or it did too much¹, which is regarded as a "Lewis Paradox". This theoretical paradox of economics of development sounds like a curse of economic development practices, limiting the reasonable boundary of the economic function of Chinese and foreign governments at all times.

The earlier industrialized developed countries are unable to break this Lewis Paradox all along. Since the birthday of modern economics, the argument that the government is just a "night-watcher" is generally accepted. Adam Smith says the

¹Lewis (1994).

government should keep away from economic activities and market as far as possible except for the engagement in basic functions involving national security and order.

But it should be noted that many people do remember his “night-watcher” but ignore his “basic functions involving national security and order”. The latter includes protecting the society from violence and aggression of other independent societies and protecting social individuals from bullies and attacks of other individuals, and establishing and maintaining some public work or public institutions as well. Since a long time ago, the dominant conception of western countries has been that the government should stay away from economic activities as far as possible; the smaller government, the less functions and actions, the better government.

However, the world economic history also indicates that at least there are two common issues that cannot be solved without government. One is that not all gain equal benefits from the economic development; the other is that economic growth cannot automatically or perfectly regulate itself so that economic crises and periodic disturbance repeat.

In fact, varieties of economic crises repeat periodically and develop into global economic crises when the globalization is deepened. Usually it firstly breaks out in developed countries that adore free market economy where most ordinary labors undertake the consequences, and then spreads to the world and harms the poor in developing countries. In addition, no matter in developing countries or developed countries, even fast growing economies, poverty is like a ghost, haunting forever. Independent of man’s will, these facts prove that a government is not better because it does less.

Since British economist Keynes’ theory of government intervention dominated the western economics, market economy countries have accepted the conception that a government should influence economic activities in necessary range. Some countries even have inclined to emphasize on planning and regulation, and industrial intervention policies, and frequently introduce macro-economic policies and establish high welfare institutions. Typical cases include “Roosevelt’s New Deal” featuring of large-scale investment in USA, Keynesian-dominating macro-economic policies in western countries and the economic plans of a high ratio of state-owned economy in France and other countries.

Nevertheless, the enhancement of the role of government neither eliminates periodic economic phenomenon of developed countries, nor wipes out poverty, but exacerbates economic fluctuation instead, for example, the States suffered from stagflation where economic recession and inflation coexisted, and European countries were difficult to sustain high welfare policies due to planning failure and market failure. Thus, the theory of neo-liberalist economy that advocates free market economy and opposes to government intervention re-emerges again and wins wide market. Developed state governments such as Reagan administration in the States and Thatcher administration in the United Kingdom put this theory into practices through series of policies like privatization and developed into so-called “Washington Consensus” integrating the theory and the policies before outputting to developing countries and transition countries.

Developing countries fail to escape from the curse of Lewis paradox either. The structuralist of the early development economics asserted active government intervention, dominated in the world from 1950s to 1960s and had material influence on policy making of developing countries. But, as a result of government distortion, developing countries didn't surpass their objectives as wished and the neo-classicism and neo-liberalistic economics concerning economic functions of government resurged and dominated in 1970s instead. The opinion denying positive influence of government made a great clamor. But when economists attempted to illustrate the experience of later industrial economies, the theory turned to a new trend that positive influence of government was valued again.

For example, many Latin American countries successively exerted two different development strategies. The first time they were affected by local theory of radical development economics and began to exclude trade and market and over-emphasized on the role of government; the second time they were affected by the thought of neo-liberalistic economics imported by "Chicago Boys" and turned to over-dependence on trade and foreign capitals, promoting market mechanism and limiting the role of government. The two development strategies are theoretically and practically are totally opposite, but in many cases, their consequences are quite similar that neither achieves favorable economic outcomes and results in so-called "Latin American Trap" or medium income trap.

The rise of East Asian economy is concluded by western scholars at first as the successful influence of free market; even later it's taken as a good story for the verification of "Washington Consensus" focusing on trade liberalization, price marketization and privatization. On the other hand, when making more studies on the experience of Asian economic development, many western scholars notice the unique role of governments of Asian countries and regions and conclude it as "developmental state". From the same case, opposite theories are summarized. It means the theoretical arguments on economic functions of government are still helpless do to crack the Lewis paradox.

In China, "Decentralization-centralization" has repeated for a long time between the central government and local governments, between government and enterprises, and between the market and the society; the vicious cycle or the deadlock seems to be impossible to break that "delegating powers to lower levels causes chaos but getting powers back results in zombie economy". Under the planned economic conditions before the reform and opening up, this "decentralization-centralization" cycle usually happened between the central government and the local governments, and between administrative departments, but since 1980s when the reform was oriented by market, the "decentralization-centralization" cycle has happened more between government and enterprises, and between the market and the society.

Previous experience indicates that repeated decentralization and centralization hasn't touched the substantial relation of government and market. Foreign observers usually conclude China's reform as the central government delegating powers to the local governments and believe the decentralization intensifies fiscal encouragement for the local governments, plus the political objective assessment mechanism for

officials enhances the motivation of the local governments to push up local economy, so China's rapid economic growth is promoted through the competition of local economies. This explanation does make sense in some degree, but it should be noted that the decentralization doesn't solve the problems between government and market. Local governments intervene in economic activities too much and sometimes run local economies like enterprises. It's imaginable that the sustainability of such an economic development mode is of great concern.

In the dual economic development period with the special growth source -demographic dividend, the economic growth is mainly driven by the inputs of capitals, labors, lands and resources. As the sources of economic growth are analyzed in Chap. 2 (refer to Fig. 2.2), the capital accumulation contributes to 70 % economic growth. During this period, the government plays a positive role in attracting foreign businesses and investments and mobilizing land resources; it can affect investments even make direct investments by leveraging the industrial policies and the regional development strategies to promote large-scale projects.

Since demographic dividend disappeared in 2010, labor supply and population dependency ratio have been more unfavorable to economic growth; capital return has been decreased more and more; contributions of capital accumulation has inevitably declined; the economic development mode over-depending on the inputs of production factors are difficult to sustain. Therefore, the source of long-term sustainable growth only comes from more efficient resource allocation and innovation-oriented technological advancement.

In this brand-new economic development period, if government continues to make too much intervention in economic activities as before, it's bad for us to gain these new growth sources. There is a perception that after the economic development stage changes and the traditional comparative advantages disappear, a state is more needed to prospect the dynamic comparative advantages in a longer term and from a more macro perspective, utilize subsidies to encourage investors to enter into industries with potential comparative advantages, make accessibility policies to prevent investors from entering into industries without potential comparative advantages, or directly promote the applications of new technologies as a supplier of public goods.

However, the good expectations on government can hardly come true. First, the government uses large-scale projects to intervene economic growth and inclines to allocate limited resources to a few industries and enterprises, which reduces the efficiency of resource allocation. Second, the government cannot be always confident about the directions of technological innovations or substitute innovations of thousands of enterprises. Last and most importantly, the exploration of dynamic comparative advantages and technological innovations relies on competition pressure and the creative destruction mechanism where enterprises have innovation impetus only when they are under survival pressure, and are liable to afford potential failures during their innovative activities; the final overall success is based on a plenty of individual failures.

The most notable defect of government intervention in economic activities is that it refuses to undertake risks or afford failures. When risks and failures come, the government inclines to safeguard the existing resource allocation pattern and deepen inefficiency of resource allocation, resulting in Zombie enterprises.

The above analysis shows the exploration of a correct answer to the relation of government and market is far from an end, but, from an internationally comparative perspective, we have recognized a government's economic functions, its realization paths and practices should be diversified and it's impossible to have an acknowledgement or consensus applicable everywhere.

An icon of western mainstream economics and in some degree a traitor, Nobel Prize winner in Economics Stiglitz pinpointed: there won't be other consensus but Washington Consensus provides no answers to such a question that nowadays which strategy has the most possibility of promoting development of poverty countries.² Every country has different social institutions, historical background, realistic problems and immediate constraints in one country, its different periods and development stages have different institutional requirements, so the government must have different functions and roles.

At least we have found a helpful theoretical starting point where we give up struggling with the Lewis paradox about "how much a government should do" but focus on a better definition about "what should a government do and undo". When this fundamental issue is clear, we move on to the secondary issue about "how to do". Combining various theories of economics, a great variety of exceptional economic practices in all countries, and the outstanding issues about the functions of Chinese government, we have made conclusions about how the government affects economic development, what measures the government shouldn't take in routine economic activities, and how the government should do in the fields that need intervention.

First, the economic function that the government should fulfill is to provide public goods. The government should prevent various monopolistic conducts and protect fairness and adequacy of market competitions by laws and necessary economic regulations; and establish social security system and labor market institutions to provide social protection for the vulnerable groups in economic development. Even in the fields to provide basic public services, the government should explore its and social organizations' specialization and avoid to do everything by itself.

Second, as to direct economic activities, the government should use fiscal and monetary policies to regulate macro economy; and implement industrial policies to explore dynamic comparative advantages and regional policies to balance economic development. But when performing these functions, the government should minimize its direct engagement in economy, stop distortion of the prices of production factors, and avoid discriminatory treatment to different business operators.

At last, in order to have a good relation between government and market, to pay more respect to laws of the market and better play the role of government, a series of reforms in important fields should be implemented, including streamlining administrative institutions and establishing a service-oriented, efficient and honest government; reforming and improving basic social insurance system to achieve equalization of basic public services; establishing law, regulation and public service platforms to create policy environment favorable to innovations and talents; eliminating institutional obstacles impeding smooth transfer of production factors like labor and capital among sectors, regions, urban and rural areas, and enterprises.

²Stiglitz (2005).

9.2 Removing Allocation Obstacles

Suppose neighboring farmland A and B have the same productivity and are close to an irrigation pond; irrigated farmland increases its output, so we suppose water is an important production factor determining the production output, and this pond is just enough for two farmlands. If this pond is exclusive to farmland A, it's well or even over irrigated, consequently its marginal output decreases; meanwhile farmland B has a seriously inhibited output capability due to shortage of irrigation. Under such circumstance, farmland A and B differ in productivity and the efficiency of resource allocation is greatly reduced. Suppose farmland B is much better and outputs more than farmland A if they have same irrigation, so if farmland B is worse irrigated than farmland A, the efficiency of resource allocation is more reduced. Once the water is allowed to flow to farmland B, and two farmlands are both well irrigated, the efficiency of resource allocation is tremendously improved and the total outputs are substantially increased.

Applying this metaphor of two farmlands into industries, sectors, and enterprises, and observing the allocation of all production factors like labor, capital and land, conclusions are easily made: if institutional inequality and transfer obstacles of resource allocation exist, productivity disparity continues and the efficiency of resource allocation hardly reach its high point; if institutional obstacles impeding resource allocation are removed, the efficiency of resource re-allocation is gained and is the most important component of TFP.

During the whole reform and opening up, the biggest change of the industrial structure refers to the resource reallocation that the ratio of agricultural labors rapidly decreases and the ratio of non-agricultural employment rapidly increases. During the planned economy, untransferable production factors especially labors accumulated surplus labors on a substantial scale in agriculture, which was the pool of surplus labors and had a low marginal productivity of labor like in most developing countries. With the economic reform pushed forward, the labor market is developing and the institutional obstacles of labor transfer is being removed, so the labor is transferred from the agriculture with low productivity to the non-agricultural industries with higher productivity, which has greatly improved the resource allocation.

If we calculate the ratio of share of value added to share of employment of primary, secondary and tertiary industries respectively and define this ratio as the comparative labor productivity, we are supposed to see the variation tendencies of comparative labor productivity of three industries that the agriculture industry starts from the point significantly less than 1 while the non-agricultural industries start from the points both more than 1, but all three industries are approaching to 1. It means the same number of labors in different industries is having increasingly equal output.

However, as in Fig. 9.1, the comparative labor productivity of secondary and tertiary industries are much closer to 1 while primary industry is still fluctuating at the level much lower than 1 and has no significant improvement. There are at least two reasons that we cannot predict material improvement of the comparative labor productivity of the agriculture from the statistic data.

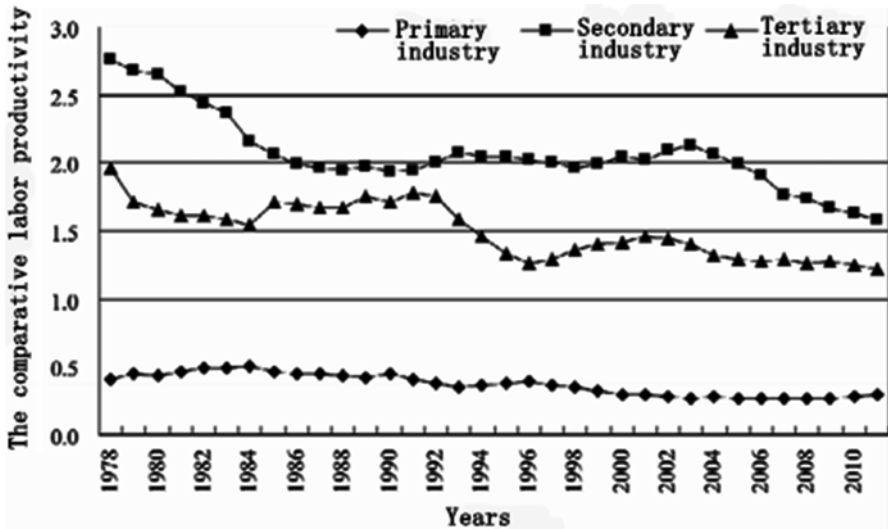


Fig. 9.1 The comparative labor productivity of three industries (Source: National Bureau of Statistics 2012)

First, such institutional obstacles as household registration system lead to incomplete transfer of surplus labors of the agriculture, so the agricultural labor ratio still remains at a higher level. The official statistics show the agricultural labor ratio in 2011 was 34.8 %, which represented a large denominator of the formula calculating the comparative labor productivity; meanwhile the agricultural value added to GDP ratio decreased sharply during the rapid industrialization, in 2011 almost down to 10.0 %, which represented a smaller numerator of the formula calculating the comparative labor productivity. Hence, the comparative labor productivity of the agriculture is not close to 1 as expected.

Second, the official statistics of the quantity and the ratio of agricultural labors are overestimated due to official definitions. When opportunities for local non-agricultural employment and migrant workers increase, a lot of rural labors completely get rid of agricultural work and also many of them turn to part-time labors engaged in both agricultural and industrial production. The quantity and the ratio of agricultural labors are overestimated if labors who contribute part of their time to agricultural work are still treated as agricultural labors. A study indicates that if labor inputs of rural labors in different economic activities are divided by month, the total amount of agriculture-engaged labors in 2009 was 192 million rather than officially 289 million, and the agricultural labor employment ratio was 24.7 % rather than officially 38.1 %.³

On the contrary, non-agricultural employment statistics especially in cities and towns underestimate the total quantity of employment. Among the urban employed

³Du Yang and Wang Meiyang (2011).

labors, an increasingly large proportion is re-employed workers who were laid off or unemployed previously, migrant workers, expatriates and informally employed workers, but enterprises usually unregister this proportion and the employment statistics based on enterprise reports omit a great number of actually employed labors.

For example, in 2009 the urban employed labors summed up according to enterprise reports was 220 million but 330 million if according to the resident labor survey, even high up to 410 million if the omitted employed migrant workers are included. It's obvious that the comparative labor productivity of non-agricultural industries inclines to be overestimated if the total labors are more narrowly measured. In other words, if the total labors were more accurately measured, the comparative labor productivity of non-agricultural industries would be further closer to 1.

Therefore, with the large scale of transfer and movement of labors, surplus rural labors tend to decrease and the resource reallocation efficiency is gained, but China's TFP improvement supported by the new efficiency will be much narrower in the future. However, when only the resource allocation efficiency is concerned, TFP improvement potential is not completely developed yet. The resource allocation efficiency mentioned before is only explained by applying the example of two farmlands into primary, secondary and tertiary industries; if the metaphor is applied into the inter-enterprise within industries cases, it can be imagined there is still huge potentials for resource allocation. Now, we cite two independent but logically identical study results to explain the existence of the potential efficiency.

The first study tells us in matured market economies like the United States, access, exit, growth and extinction of enterprises constitute a creative destruction and create the resource reallocation efficiency, which improves TFP productivity accounting for 30–50 % total productivity.⁴

The other study involves China. Economists discover that China's enterprises within the industrial sector differ much in their productivity. The productivity disparity is much higher than that in the United States no matter measured by what index. It's beyond doubt that enterprises with low productivity are not eliminated and enterprises with high productivity don't expand themselves. It's thus deducted and quantitatively confirmed that if the law of the fittest to survive prevails, production factors will be better allocated and the productivity disparity among enterprises will decrease to the level in the United States, finally China's industrial TFP will increase 30–50 %.⁵

The two independent studies above coincide to get the identical conclusion about TFP improvement and imply China has not utilized the opportunities to improve TFP. The source of high TFP can be expected from life and death or growth and extinction of enterprises. What institutional obstacles we need to remove to achieve what we expect?

The movement of production factors, after all, is not quite smooth between sectors, between industries and between enterprises; as a result, the competition is imperfect. The experience of Chinese economic growth has repeatedly shown that

⁴Foster et al. (2008).

⁵Chang-Tai Hsieh and Klenow (2009).

the competition is the fundamental driving force and the source for efficiency improvement. On one hand, the state-owned economy has improved its efficiency under more competition pressures. For example, a study⁶ shows the annual growth rate of the state-owned sectors' TFP was 0.70 % from 1978 to 1988, down to -0.05 % from 1988 to 1998, but high up to 4.19 % from 1998 to 2007, almost equal to the non state-owned economy. On the other hand, the competitive non state-owned economy has faster TFP improvement than the state-owned economy during the whole reform period. The annual growth rate of TFP was 1.36 % in state-owned sectors but 4.74 % in non state-owned sectors from 1978 to 2007. The former accounts for only 28.7 % of the latter.

The same study also shows that excluding infrastructure factors, the state-owned economy has higher capital to labor ratio, lower capital return rate and worse TFP performance than the non state-owned economy. For example, from 1978 to 2007, compared with the non state-owned economy, the growth rate of capital per labor of the state-owned economy was 270 %, the growth rate of production per labor was 95 %, but the TFP growth rate was only 1/3. This comparison implies resources are not allocated into sectors with higher productivity.

But if we not just focus on the average numbers from 1978 to 2007 but observe and compare the state-owned and the non state-owned economies in different periods, we can see from 1998 to 2007 when the state-owned enterprises kept dropping their proportion in total industrial output, their fixed asset ratio and employment ratio after the deepened reform, both state-owned and non state-owned economies were under greater competition pressure and their increase speeds of capital per labor, output per labor and TFP were quite similar. As it is, the reform is not about enterprises with what types of business ownership should exit the market, but to create favorable conditions for free access and exit of competitive industries. Only competition encourages innovation and achieves optimized resource allocation.

9.3 Fear for Poverty and Unequal Distribution

Strictly speaking, when Confucius says “don't worry about poverty but rather about the unequal distribution of wealth”, he doesn't intend to emphasize “not worry about poverty” but “about the unequal distribution of wealth”. This philosophy doesn't contradict our philosophy of making a big cake and distributing the cake equally. In fact, Chinese and foreign history experience and lectures tell us making a big cake is undoubtedly the necessary condition for distributing the cake equally, although not the sufficient condition. For example, in the first decade of the twenty-first century, some Latin American countries like Brazil had good performance in economic growth and correspondingly dropped their Gini coefficients substantially. The United States since 1970s has slowed down its economic development and made some policies unfavored against the poor, so its poverty has increased and

⁶Brandt and Xiaodong Zhu (2010).

resident income gap has widened, and it becomes a developed country that has the most unequal income distribution and the biggest Gini coefficient.

In modern China, people generally recognize that the income distribution is closely correlated with the government's preferential policies, so discussion on equity and efficiency last forever. When time changes and the income distribution situations change, opinions fight against each other tit for tat.

Fairness and efficiency becomes a widely-discussed proposition which at first targets at equalitarianism and absence of incentive mechanisms during the planned economy. "Communal Dining System"⁷ prevailed in that period and the way to wealth was legally and practically blocked. To solve these problems, Deng Xiaoping proposed an objective in the middle of 1980s that allowing some people to get rich first and thus all people would be well-off together. Consequently an official theory was developed that "giving priority to efficiency with due consideration to fairness". Since its proposal at the Third Plenary Session of the 14th CPC Central Committee in 1993, this statement, for a very long time, has been the most widely accepted consensus, which criticizes the malpractices of traditional equalitarianism and the prevailing communal dining system, emphasizes giving priority to efficiency, strives to establish incentive mechanisms, and has positive influence on the mobilization of the initiatives of labors and entrepreneurs.

When the market mechanism of production factors gradually becomes the basic mode of resource allocation and income distribution, and the income gap between regions, the urban and the rural, sectors and the social members tends to expand, people start to value the fairness of income distribution. Especially when some institutional factors result in unreasonable income gap and even wealth disparity, most people suggest policies should turn more to the fairness. These new recognitions are also reflected in the official statements on fairness and efficiency. For example, the report of the 16th CPC National Congress made a new statement that "in primary distribution, we should pay more attention to efficiency; in redistribution, we should pay more attention to fairness", strengthening the function of the government in regulating income distribution and making promise to narrow the gap if it is too wide. After the 17th CPC National Congress, the official statement is much clearer that "a proper balance should be struck between efficiency and fairness in both primary and secondary distribution, with particular emphasis on fairness in secondary distribution".

In common discussions, most people more or less take efficiency and fairness as two opposite concepts and believe their relationship more like "you can't have your cake and eat it too". In fact, this theory comes from Okun's *Equality and Efficiency: The Big Tradeoff*, published in 1975. Even if the Chinese versions don't mistranslate the subtitle of this masterpiece but more or less deviate from its original meaning and mislead people. Most versions translate "the Big Tradeoff" into "great decisions" but actually it means that "you can't have your cake and eat it too".

⁷The Communal-Dining System popular during the 1950s through 1970s – get an equal share regardless of the work done.

The cognition taking fairness and efficiency as opposite and you cannot have both may cause misunderstanding and policies constantly changed, even result in extreme distribution policies. It goes against the roles of primary distribution and redistribution mechanisms or substitutes populism policies for social distribution policies. Some countries even have catastrophic outcomes, and their policy intentions and effects are least aligned.

Efficiency and fairness are both objectives of development. Efficiency is the key to mobilize the initiatives of economic development participants and the core to establish effective incentive mechanisms, while fairness is the ultimate objective of economic development and also the benchmark to measure efficiency. Efficiency and fairness are essentially not contradictory. On the premise that efficiency is ensured, making a big cake is the material base for equal distribution and then the economic development achievements can be shared. Only when equal distribution is ensured, efficiency will be attained and find its own destiny. But efficiency and fairness have different emphasizes and won't be balanced automatically.

Giving due consideration to both needs to select different priority orders and preferential policies to solve different principal contradictions in different periods or development stages, according to the requirements of the outlook of scientific development. Then, what's the most outstanding issue facing to China in income distribution at present? What are the difficulties to reform the income distribution system? What's the breakthrough to propel the reform and gain material achievements? Now we are going to combine the general rules of income distribution with China's exceptional contradictions together to discuss the above issues.

Nobel Prize winner in Economics Simon Kuznets had a famous observation that as an economy develops, the economic inequality at first increases, and then decreases after it reached a certain turning point. This natural cycle is called "Kuznets inverted U-curve". As there are many empirical researches proving and denying this observation up date, the relation between economic development and income distribution advanced by Kuznets is viewed at most as a hypothesis. It must be admitted there are a variety of factors affecting income distribution and the dominant factors vary according to economic system, development stage and preferential policies of a country. Even if there is a changing trend similar to Kuznets observation, it must be complicatedly embodied.

As the Chinese economic development stage changes, the income distribution pattern has indeed changed either. Generally speaking, the change of income distribution is mainly influenced by three factors and the income gap may be widened or narrowed. The relative effects of three factors vary in different periods, so their comprehensive effect results in the specific track of the changed income gap.

First, as the labor market gradually develops, labors have both population difference and individual difference in terms of human capital, so the income splits and even the income gap widens. In a sense, this effect helps improve labor enthusiasm and education incentives. The reform and opening up to promote economic growth is not national widely carried out and advanced at the same time, so economic development opportunities are not equally distributed among regions and population. Income increase happens one after another. Even when the opportunities

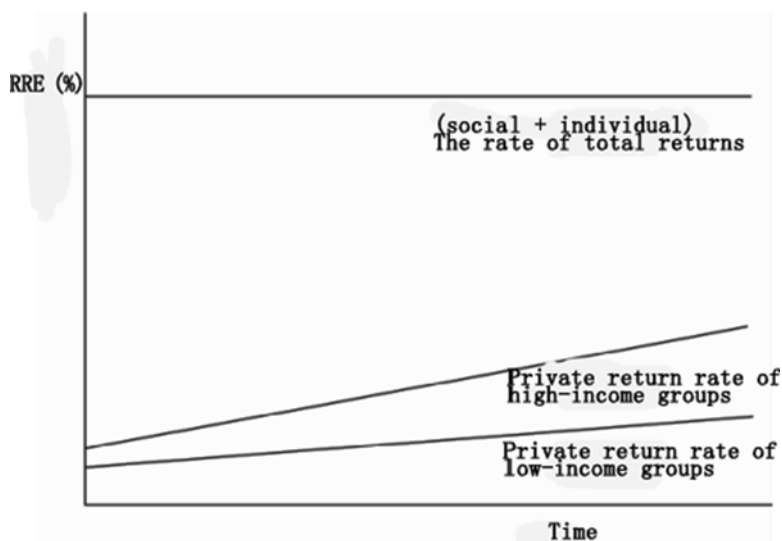


Fig. 9.2 Increase trend of the rate of private return to education

are identical, labors hardly simultaneously take the opportunities to increase income and get rich due to different family status, ages, genders and education levels.

Economists take delight in talking about the rate of return to education (RRE), which measures the income gap caused by talent differences of human capital. It's a percentage of income added per one more year education. The human capital returns include private return that individual labors receive and social return that the society receives. When salary is not determined by the labor market, human capital of labors also creates additional values, but most are received by the society rather than individuals. The payment for labors are not incentive, neither encouraging creative work nor more education.

As in Fig. 9.2, during the reform and opening up, as enterprises' incentive mechanisms and the labor market develops and improves, human capital receives private returns and the share of private returns in total education returns (sum of social returns and private returns) inclines to increase over time.

For example, some Chinese scholars use micro data to get the conclusions that the rate of private return to education increased from 1.2 % in 1989 to 2.2 % in 1993, 3.8 % in 2000 and 8.9 % in 2006.⁸ In fact, it doesn't mean the rate of overall return to human capital increases, but in total human capital returns, the part received by individuals increases over time. This change is undoubtedly the natural outcome of the labor market development, although it widens the income gap between labors, generally it has positive incentive effects.

However, the increased rate of private return to education may have unfavorable effects on widening the income gap. Some scholars discover that the RRE of

⁸Wang Zhong (2010).

high-income groups is way higher than that of low-income groups. The former has natural institutional advantages in getting education opportunities. For example, as the public education resources are distributed unequally, big cities have more education opportunities and better education quality than small and medium cities and the rural areas. The high-income groups have more social connections and even privileges to make their children enjoy better education resources. The income gap caused by education resources is morally unfair; it's inefficient for education investment and development and causes inter-generational poverty.

Second, as the employment scope for urban and rural residents expands, especially the rural labors have more opportunities for non-agricultural employment, the income gap between the urban and the rural is narrowed down and the total income distribution is improved. The earlier employment and development opportunities are accessible to the groups with competitive human capitals, but increased employment opportunities will benefit more and more labor groups. This is so-called "trickle-down effect".

During the whole reform and opening up, China is generally at the dual economy development stage, where a plenty of surplus labors transfer from the agriculture to the non-agricultural industries, the labor participation rate increases, and more common households and labor groups share the economic growth achievements. The migrant workers get employment opportunities for salaries higher than the income of agricultural work, so the overall poverty level of the rural areas is reduced. Even it doesn't narrow down the income gap between the urban and the rural, it does inhibit the widening income gap between the urban and the rural.

The household contract system based on equal land distribution ensures labors unrestrictedly mobilize in pursuit of higher income and better life. Even if the wage rate keeps consistent, the expanded scale of labor mobility would increase the incomes of farmer families substantially. The effects of labor mobility on increased income of farmer families and narrowed income gap between the urban and the rural can be observed from the following three aspects.

Firstly we look at the poverty reduction effect of labor mobility. Except for those families with insufficient labors or incompetent employability, insufficient employment is the biggest reason for most impoverished families. Previous studies show the non-agricultural employment opportunities are firstly accessible to the groups with skills or influential family background in rural areas, but when employment opportunities increase, the impoverished families begin to get benefits. Outside work means it's possible to get higher income. Studies indicate that the impoverished families increase 8.5–13.1 % net household income per capita by sending their labors out to work in cities.⁹

Secondly we look at the contributions of wage income to the income increase of farmers. According to the National Bureau of Statistics, the net income of farmer families is divided into wage income, household business net income, property income and transfer income. Increased outside employment opportunities substantially increase wage income of farmer families and also the share of wage income in

⁹Yang Du et al. (2005).

total family income. Wage income becomes the main source of increasing the income of farmers. The official statistics show the proportion of wage income of farmer families increased from 20.2 % in 1990 to 42.5 % in 2011, and wage income contributed to 50.3 % of net income increment of farmers.

Actually the current statistics system omits a large portion of working income. As the household survey of official statistics is conducted separately in the urban and the rural, the whole families moving into cities and the rural family members going outside for work are excluded from the urban samples due to their difficult accessibility and also excluded from the rural household samples because they are no longer permanent rural residents, so the working incomes of migrant workers are substantially underestimated. Local survey discovers the disposable income of urban residents is overestimated by 13.6 %, the net income of rural residents is underestimated by 13.3 %, and the income gap between the urban and the rural is overestimated by 31.2 % due to the sampling and the definition of official resident survey statistics.¹⁰

Labor mobility eventually eliminates the infinite supply of labors in the dual economic development stage. This symbolic turning point is Lewis turning point, which doesn't mean absolute shortage of labors but temporary shortage of labors if the wage has no material increase. Therefore, after the Lewis turning point, the growth of incomes of migrant workers and farmer families are accelerated, consequently the income gap between the urban and the rural is narrowed down. The narrowed income gap between the urban and the rural definitely reduces the inequality of overall income.

From the published official data of the National Bureau of Statistics, we select the income gap between the urban and the rural and the Gini Coefficient of national residents to describe the changing tendency of the income distribution pattern. Generally, the income gap ascends for a long time, but when Chinese economy reaches the Lewis turning point, the widening income gap is inhibited and shows a clue of decrease (Fig. 9.3).

Thirdly, the widening or barely narrowing income gap caused by the issues arising from the reform and opening up or the temporal phenomenon arising from the uncompleted reform should be solved by deepening the reforms on economic institutions and social policies. In order to improve the utilization of natural resources and stock assets, during the institutional transition, some state-owned assets are privatized, many mineral resources are used by individuals or groups, and the right to derive benefits from lands is owned by individuals or enterprises. As a result, varieties of resources and assets are divided and distributed, the nominal state ownership and the actual "no one to possess" turn into individual or group ownership, and then produce individual incomes.

As the distribution of resources and assets is unsupervised, many practices are not standardized or transparent, even violations of laws and regulations are frequent, so the subsequent benefits are usually gray incomes, which are distributed in extremely unequal way and constitute the major factors to widen the income gap.

¹⁰Gao Wenshu et al. (2011).

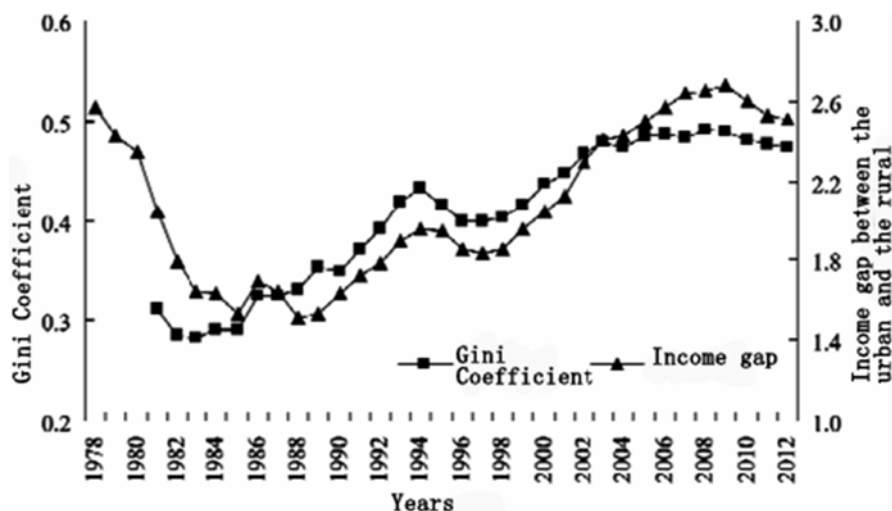


Fig. 9.3 The changing tendency of the income gap of residents (Source: National Bureau of Statistics, China Statistical Yearbooks, http://www.stats.gov.cn/tjdt/gjtjdt/t20130118_402867315.htm)

Scholars estimate that all kinds of off-payroll incomes or gray incomes in 2008 was 2.19 times as much as the official disposable income per capita of urban residents, and 80 % was concentrated in the 10 % highest income group.¹¹

Just because of this, Chinese society still pays close attention to income distribution and the masses don't think the status of income distribution has been significantly improved. To get an accurate recognition of the changing trend of actual income distribution, we could divide the present income gap into two levels: the income gap of labor market and the social income gap. The description above tells us the income gap of labor market has inclined to decline, meeting the expectation of Kuznets curve, but the social income gap has no fundamental reversal.

It's because the unequal distribution of production factors except for labor gives rise to the difference of two calibers of income gaps. Men of insight generally believe that unequal income distribution is one of the sources of potential social risks in future. In fact, according to Fig. 9.3, we propose two important issues about the income distribution system.

First, the tendency in Fig. 9.3 is concluded without the consideration of the distribution of gray incomes beyond the statistics. If it's considered, we can estimate the fundamental reversal of the income distribution status has not come yet. This special source causing unequal income distribution implies the preferential fields of the reform. To solve the unequal income distribution, we can do something from three aspects including increment, stock and income stream.

If we solve the unequal income distribution from increment, we should strictly abide by laws and follow standardized procedures to institutionally stop the

¹¹Wang Xiaolu (2011).

intervention of powers during the development of lands and mining resources. In order to prevent depriving farmers of benefits during the expropriation of rural collective lands and the change from rural residents to urban residents, it should accelerate affirming the rights of land contract and homestead and prohibit any infringement on the property rights of farmers. In the process of state-owned economy restructure, to prevent the state-owned assets from losing into individuals and groups unfairly, it should clearly and strictly define the property rights and standardize the change of the property rights. The more fundamental solution is to enhance the supervision of administrative officials who possess the power of resource distribution, intensify corruption fights and preventions and minimize leaders' and cadres' individual power of resource distribution.

To solve the unreasonable stocks of individual or group assets and their income flows, we should focus on laws and taxations to regulate high incomes. At present, Chinese taxation system featuring high indirect tax ratio, low direct tax ratio and less progressive nature, has little effect on income distribution regulation, so it should enact categories of taxes that regulate income distribution like legacy tax and estate tax as soon as possible. Meanwhile, it should encourage and promote the employee stock ownership plan, which has certain effect on asset equalization.

Second, we should keep following the path to increased employment of urban and rural residents, which is an important motivation factor of narrowing the income gap. However, to date the narrowed income gap is still at its preliminary stage. Whether it becomes a stable tendency and evolves into the downward phase of the Kuznets curve it's up to the reform relevant to the income distribution system that the institutions effective for a long term should be constructed to create favorable conditions for the Kuznets turning point.

The institutions to construct are summarized as followed. Firstly, as the Kuznets turning point doesn't happen naturally, the material narrowing of the wage income gap depends on construction and improvement of such a series of labor market institutions (including labor laws) as minimum wage, labor union and wage collective bargaining. Secondly, the administrative policies on income distribution and people's livelihood improvement still have critical effects on narrowing the income gap. For example, more inclusive and equalized education is the fundamental method to narrow down the income gap and prevent inter-generational poverty. Finally, the government should pay great efforts to improve income distribution with a view to the balance between the economic growth and the redistribution policy.

9.4 Social Protection Is Not a Negative Incentive

No matter in rich or impoverished countries, personal capabilities vary a lot, for example, high or low education, young, prime or senior age, healthy or sick, so some social membership are relative or absolute vulnerable after all; even if one person has advantages in these capabilities, he is still exposed to irresistible economic strikes like unemployment or bankruptcy and various natural risks and then

falls into a difficult life. Therefore, people need social protection to prevent, respond to and overcome the vulnerabilities that reduce people's welfare.

Social protection refers to the system composed of a series of policies and programs including social insurance, social assistance and labor market institution. "All the people enjoy their rights to education, employment, medical and old-age care, and housing" proposed at the 18th CPC National Congress refers to the life that the government expects all social members to enjoy through basic public services it provides.

Social protection is a vogue word but has a long history of theory development and policy dispute. According to Malthus, the social protection we talk about today only exacerbates but not alleviates human disasters and poverty. Under the hypothesis that food growth cannot satisfy the needs of population growth, he believes the root of poverty is population growth. Therefore, any efforts attempting to help the poor finally result in opposite consequences due to the increased birth rate. He not only fights against any theoretical conception on social protection but also proposes the policy to gradually abolish the Poor Law in England.¹²

Just as his poverty trap is broken after the Industrial Revolution, Malthus' opinion repelling all social protections based on his own "law of population" conflicts with his vague theory of "effective demand". In modern society, the root of poverty is no longer that absolute output is insufficient to meet people's adequate needs on food and clothing, but that institutions hinder vulnerable groups from accessing to their own shares. In any times and any societies, vulnerability is inevitable. In today's world, any opinions objecting to provide social protection for vulnerable groups cannot win over academic or moral alliance any more.

John Stuart Mill, a Malthus' contemporary, warns that social assistance generates two outcomes: assistance itself and the dependency on assistance. No doubt the former is helpful but the latter is harmful to its most extent. The dangers of the latter may offset the positive effects of the former.¹³ This "Mill Dilemma" that how to gain the balance between the mutual aid of social protection and the incentive of labor market is much more disputable than Malthus theory.

Now, China's institution and policy system that gives social protection into full play comprises of three parts. The first part refers to the basic social insurance system including social pension insurance, basic medical insurance, employment injury insurance, unemployment insurance and maternity insurance for urban employees and residents, and new social pension insurance and new cooperative medical insurance for rural residents. The second part refers to the social assistance system including subsistence allowance system for urban and rural residents, medical assistance system and other compensation and relief payment system. The third part refers to the labor market system including minimum wage system, wage collective bargaining system, labor contract system, labor dispute arbitration and conciliation system. Combining all these together, we try to give a Chinese answer to the "Mill Dilemma".

¹² Malthus (2012).

¹³ Quoted from Hoddinott (2010).

Firstly, during the transition stage from rapid economic growth to sharp structural change, Chinese society has increasing institutional demands on kinds of social insurances. When the potential growth rate is at a high level, restriction of the actual growth rate comes from the shocks of the demand-side factors, while overall employment expands, cyclical unemployment occurs from time to time. During the biggest unemployment shock in the end of 1990s, China established the social pension insurance and unemployment insurance systems in a short time. After that, when the potential growth rate decreases, the role of social insurance will be intensified rather than weakened.

As the industrial restructuring accelerates, laborers are more exposed to structural unemployment risks. Not only the skills of migrant workers may differ from the requirements of enterprises, but also new laborers with high education background may have difficulties in finding a job because of unmatched human capital. To solve the structural unemployment, the government should implement proactive employment policies, and also deliver the signals of skill requirements through the labor market so as to provide incentives for individuals to receive education, for schools to reform the education system and for the society to enhance employee training. The signal delivery means some of the laborers will get laid off, which is manifested in natural unemployment.

As to enterprise competition, the mechanism for the market to give its role into full play is the creative destruction. On the labor market, competition pressure is necessary, but the “destructive” mechanism cannot be applied onto labors. Therefore, it must have a safety net with a wide coverage to give social protection to those labors that are temporarily excluded from the market. If there is no solid social protection system, it would be difficult for China to accomplish the tasks of economic transition and industrial upgrading.

In China’s labor market, there is contradictory phenomenon. On one hand, the industrial upgrading creates huge demands on labors with higher education; on the other hand, difficult employment of college graduates is quite outstanding. To solve this contradiction, the competition mechanism of labor market and the social protection mechanism should be combined together before their full utilization.

One important reason that college graduates are difficult to find a job is their employment scope is too narrow. China had only 10.1 % employees with college degree in 2010, 30 percentage points lower than 40.1 % in USA in 2006. Comparing the distribution of employees with college degree in both countries, we find out Chinese college employees are over-concentrated in finance, information, education and health, and public management industries, in other words, these industries in China has a higher ratio of college employees than USA.

But in the directly production industries, China has a much lower ratio of college employees than USA. For example, as to the ratio of college employees in agriculture, China has 0.6 % while USA has high up to 24.6 %; in manufacturing industry, China has 10.3 % while USA has 30.0 %; in transportation industry, China has 10.8 % while USA has 27.1 %; in business, trade, catering and tourism industries, China has 11 % while USA has 28.6 % (Fig. 9.4).

Laborers with higher education usually don’t voluntarily turn from high-end service industries to traditionally low-end positions in manufacturing even agriculture

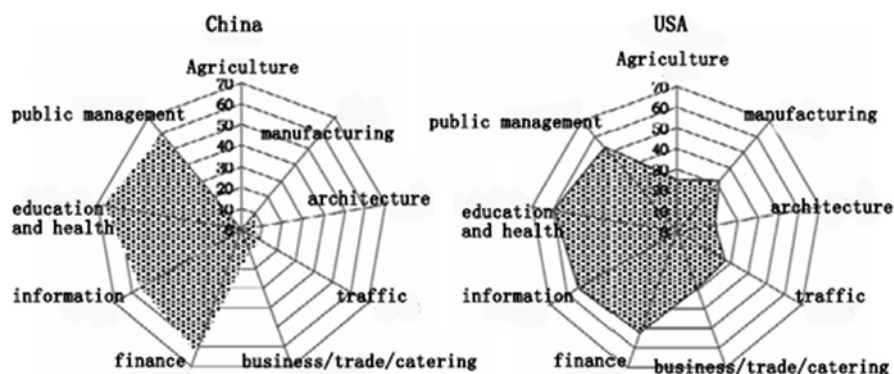


Fig. 9.4 The ratio of college employees in different industries in China and USA (Source: Hu Ruiwen et al. 2013)

industries. On one hand, the directly productive industries need to upgrade themselves before increase their demands on high-end laborers; on the other hand, only leveraging the market and experiencing job hunting, employment pending, employment, unemployment and re-employment could gain a more balanced and diversified employment structure for college graduates. This transition is also the period when laborers encounter shocks, so it definitely needs the social insurance system to provide a safety shelter.

Secondly, the labor market transiting from oversupply to structural undersupply stimulates labors' demands on the labor market institutions. Since entering the twenty-first century, labor disputes even conflicts between employees and employers have rapidly increased. Medium coverage or gossips are not statistical evidences of some significant conclusion, but we can have a judgment on China's labor relation from the increased recorded labor disputes.

The recorded labor disputes have two categories. One refers to the cases accepted by labor disputes arbitration institutions at all levels in China and the other refers to the conciliation cases. Two categories were totaled 208,000 in 2000 and kept gradually increasing per year until 2005 when a great leap forward happened. Recorded cases in 2005 increased 96.2 % more than in 2000. The increase continued and the cases increased 87.8 % from 2005 to 2010. The greatest leap was in 2008, high up to 85.4 %.

However, the substantial increase of labor dispute cases in 2008 was a typical consequence of legislation. In that year, three laws related to labor employment were simultaneously carried out, including Labor Contract Law, Employment Promotion Act, Law of Mediation and Arbitration of Labor Disputes. These laws extend the scope of the protection of rights and interests of labors, intensify the protection, reduce right protection cost and prolong the validity of labor dispute appeals. No doubt they have positive effects on stimulating right protection awareness of laborers and encouraging right protection activities.

The experience of many countries tells us that the intensified labor disputes or employment hostility during the specific development stage are not the outcomes of

worse employment conditions, but the awakening consciousness of right protection because laborers have more requirements on wage, workfare and working conditions, when the supply-demand relationship of laborers changes and employment opportunities increase. This is a regular phenomenon symbolizing that labors have higher demand for the labor market institutions.

European and American countries, Japan, Korea and other Asia economies finally have learnt to conform to the rule of “growing pains” after they paid heavy prices in the period of frequent labor and capital frictions and have established complete labor market systems, improved employment quality, formed institutional frameworks to solve employment disputes and opposition, and maintained social stability. On the contrary, those countries falling into the medium income trap suffer from social disharmony even unrest due to unestablished institutions, or unhonoured promises or repressive policies.

Whether China should make active response to the desperate demands on the establishment of labor market systems, the academic circle even the policy makers haven’t reach a consensus. A lot of people are quite worried about the labor contract system, the wage collective bargaining system and even the minimum wage system, and believe these systems will result in increased labor cost, reduced competitive advantages of manufacturing products, and moreover, will encourage labors to undertake right protection activities, causing social instability.

This opinion obviously is developed based on the confused recognition. Increased wage is an inevitable trend when Chinese economy passes the Lewis turning point; if social instability occurs, it’s not attributed to the labor market systems but it’s the inevitable outcome of the shortage of these systems.

A high-profile and influential economist Steven Cheung always disapproves the establishment of labor market systems. When NPC Standing Committee approved the Labor Contract Law, Professor Cheung wrote a critical comment and was even impatient to attach this comment to his book as an “unpleasant postscript”.¹⁴ After that, he spared no efforts to persistently condemn this Law both in speech and in writing. Usually economists are unable to reach a consensus about the role of labor market systems, and this book has no intention and also is unable to end this lasting-forever dispute. But thinking about the following respects, we may at least know the necessity to enhance the establishment of labor market systems at this development stage of China.

Economists are always hardhearted and ice-cold when talking about competition and efficiency. Economics is about rationality, so it has no ground to blame that economists are more rational than emotional. However, the difference between the labor market and the product market and other production factor market is its transaction participants and object are living people. British economist Marshall once said it mattered nothing for the supplier of bricks that whether bricks were used to build sewers or palaces. But the seller of labor force-the labor must care about how labor force will be used after the sale. Besides, asymmetric information exists in the employment relationship of labor force, so the reasonable rights and interests of

¹⁴ Steven Cheung (2009).

under-informationized labors are usually infringed in the unruled market transactions and employment.

No one denies kinds of labor market systems intend to solve the vulnerability of different participants of labor markets, but their disagreement lies in whether the protection beyond the balanced supply and demand in labor markets becomes a negative incentive for hardworking employees and initiative employers. The international comparison indicates the developed countries have established perfect labor market systems that have positive effects already, but many developing countries do have relevant systems that have no effects at all or generate negative incentives.

It means there is eventually a turning point that the economic development once steps over, the labor market systems will become indispensable. This turning point logically is closely correlated with the Lewis turning point that reflects the change of the supply-demand relationship of labors. When infinite labor supply turns into a shortage, China is more desperate for labor market systems. Economic theories and practices should advance with the times, so people like Professor Cheung shouldn't take the alternative options at the specific development stage as eternities.

Therefore, in employment, to let employers and employees know how many and what laborers are needed in the labor market, the supply-demand signals should be delivered in the forms of wage level, unemployment rate or employment difficulties, even the competitive surviving in jobs, but giving the most basic social protection to market participants is an inescapable responsibility of the government. Those societies with more social cohesion anytime anywhere usually get profits from their perfect labor market systems.

Thirdly, intensity and coverage of China's social protection at present is far from enough to make people dependent on it. The prolonged dispute about the "Mill Dilemma" may make some sense to the developed EU countries where contradictory cases coexist. For example, during the finance crisis and the debt crisis, social protection and economic performance conflict with each other in Spain, Greece and Italy, and social protection and economic performance promote each other as well in Sweden, Denmark and Finland. Nordic countries with typical high welfare have very healthy economic development during the European debt crisis or at least have enough outstanding achievements to be superior to some other countries in Europe.

Many researchers believe one of important reasons that Latin American countries stay in the medium income trap for long is that these countries implement populist welfare catch-up regardless of their own current development stages, fiscal capabilities and market mechanisms.¹⁵ Latin American countries did make too many promises on welfare but finally could hardly achieve equalization or even make material fulfillment. But it is at most one of expressions of typical countries in the medium income trap rather than the fundamental reason that why they have fallen into the medium income trap.

To a certain extent, the populist welfare policy is rather the last option brought by economic stagnation. When the cake is no longer bigger, not all commitments on social protection are kept if too many; sometimes they are even just lip services.

¹⁵ Fan Gang and Zhang Xiaojing (2008).

This dispute is not straightforward directed at China. Compared with European countries even Latin American countries, China has a very low level of social protection by far. To those who are worried about too much social protection, they focus on the level of benefits and the relevant rules of social protection projects. However, it's quite obvious and it must be recognized that China's social protection has not only a small coverage but also a very low absolute level.

Take the coverage of five types social protection projects for example. In 2012, the respective coverage of migrant workers whose employment is 1/3 of urban employment by social insurance programs was 14.3 % pension insurance, 24.0 % employment injury insurance, 16.9 % medical insurance, 8.4 % unemployment insurance and 6.1 % maternity insurance. In fact, even those urban employees with local household registration have respectively 61.9 %, 51.2 %, 71.4 %, 41.0 % and 41.6 % coverage of the aforementioned social insurances in the same year, much lower than the level of full coverage.¹⁶

Take a look at the minimum wage level and its changes. From the data of minimum wages in selected cities, we can see the efforts made to improve the minimum wage standard. More cities strive to average up their minimum wages in recent years and their improvements are increased year after year (Fig. 9.5). However, during 1995–2012, the actual annual growth rate of average minimum wage was only 7.8 %, lower than the GDP growth rate and the growth rate of average wages of urban employees as well in the same period. In 2012, the minimum wage to average wage

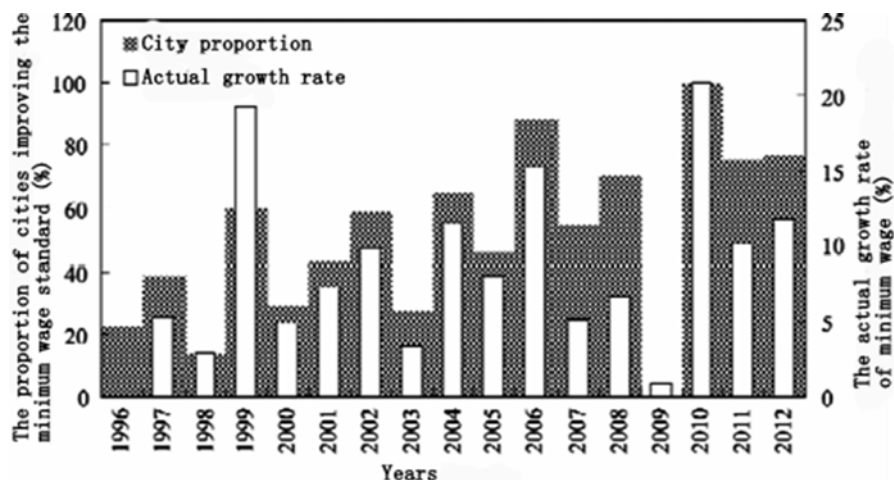


Fig. 9.5 The cities improving the minimum wage standard and the average increase (Source: the minimum wage database of the Institute of Population and Labor Economy of Chinese Academy of Social Sciences; the data in the database is collected and edited from the websites of human resources and social security departments of all concerning cities)

¹⁶This category of employees and the groups participating in social insurances include a small part of migrant workers, so some statistical data may be repeated.

ratio was 26.1 % in urban non-private businesses and 42.5 % in urban private businesses, not high if compared with the international levels.

The current coverage and level of the minimum subsistence allowance system at present is far from enough to make people dependent on it. In 2012, only 3 % urban population received the subsistence allowance which was 239 yuan per capita per month, equivalent to 11.7 % per capita disposable income of urban residents per month in the same year; only 8.3 % rural residents received the subsistence allowance which was 104 yuan per capita per month, equivalent to 15.8 % per capita net income of farmers in the same year.

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Chapter 10

Embracing the Great Renaissance

When Chinese economy maintains rapid growth and China's comprehensive national power is increasingly enhanced, regaining the worldwide leading position at both material and cultural civilization is becoming the realistic dream of billions of Chinese. It's appropriately defined as the "Chinese Dream". China is the only country in human history that continues the ancient civilization and experiences rise and fall and then great renaissance. However, the history economic growing achievements cannot promise the future growth; overall income increase doesn't mean the development is naturally inclusive and shared; the task to step over from medium income phase to high income phase is even more difficult than to get rid of the poverty trap. Great efforts are needed to realize the great dream.

10.1 "Needham Puzzle"

The Chinese people propose a grand target for themselves that by 2050 marking the 100th anniversary of the founding of the People's Republic of China, the great renaissance of the Chinese nation will be achieved. This "Chinese Dream" is elaborated as "renaissance" rather than "revitalization", because in history China was not always backward in science and technology development and economic prosperity but outpaced the world for a long time.

Western economic historians have long denied so-called "Euro centrism" very earlier and made a clear statement that the pattern of the contemporary economy that the Europe and its oversea immigration areas are at the absolute leading position in science and technology, economy and per capita income is not as it always was. Scholars' researches indicate that around year-1500 the world's wealth was concentrated in the East, where China occupied the most important position. After that the Europe started to rise. In late eighteenth century the "Great Divergence" emerged between the East and the West. During the same period, China began to fall behind

of the West in economy, science and technology and people's livelihood and gradually degenerated into a poor and weak country.

The prolonged academic curiosity of most subjects is to find out the explanations to the rises and falls of a nation. Economists persevere to develop kinds of theoretical frameworks with the hope of demystifying economic growth. Inspiring people to take China that has experienced rise and fall as the main study object is the so-called "Needham Puzzle" named after the famous China science historian Joseph Needham. This thesis attempts to answer why in pre-modern society Chinese science and technology was far ahead of other civilizations but lost its leading position in modern times.

For a long time the dominant explanation comes from the so-called "high-level equilibrium trap" theory. This theoretical assumption believes Chinese agricultural practices in history combined traditional technology and productive factors into such a perfect mix that a living standard much higher than the earlier European history was maintained, resulting in rapid population increase. Consequently excessive and cheap labor forces left no room for labor-saving technologies to be useful.¹ According to this theory, only large-scale applications of capital-intensive or labor-saving technologies would complete the necessary technological change to avoid Malthusian trap. But actually this assumption fails no matter reasoning the economic theoretical logic or observing the history facts.

First of all, Europe did experience land cultivation and border exploration in the medieval period, but had tight human-land relation for most of its history. Only then, Malthusian equilibrium trap becomes the most sustainably explanative theory.

Second of all, economic studies indicate the agricultural technological advancement is caused by relatively scarce productive factors. Between the labor-saving technological change and the land-saving technological change, none is superior to the other. Empirical studies demonstrate that, in fact, a country with a large population has more pressure and driving forces to achieve faster technological advancement and population growth due to the tight population-land relation.²

After all, either high-level equilibrium or low-level equilibrium is a specific reflection of Malthusian trap. Any chance to increase food production is eventually a temporary disturbance factor. The resulting population growth will finally pull the productivity to the equilibrium level for the subsistence.

Over the past 200 years, Malthusian theory has been constantly criticized but still has an enduring influence. It's because this theory does provide a logic explanation for thousands of years of human economic activities before the Industrial Revolution. As an economic pattern exists for such a long period and across such wide territories, it of course won't be stereotyped. So, Malthusian trap has both high-level and low-level equilibrium.

¹ The proposer of "high-level equilibrium trap" is Mark Elvin. The most simple and concise summary of this theory is referred to in Daniel Little (1998).

² Kremer (1993).

For example, according to Maddison’s statistic data, in 1500, Italy, the richest country in the Europe had 143 % per capita GDP higher than Finland, the poorest country; Britain, the birthplace of the Industrial Revolution, was 57.6 % higher than Finland. The per capita GDP of 12 European countries were higher than China, 33 % in 1500, 51.3 % in 1600, 72.2 % in 1700 and 110 % in 1820.³ As it is, the “high-level equilibrium trap” can neither perfectly explain the “Needham Puzzle” nor justify itself, with the historical evidences.

Economists attempt to demystify “Needham Puzzle” with more rigorous theories. For example, Justin Lin believes China’s technology leading in the pre-modern society is because of more innovations created by a large population; the reason that later China’s science and technology and even economy falling behind of the West is the failure of transforming to modern technological innovation mode based on large-scale experiments. He concludes that discouragement of technological innovations and the imperial examination system that focusing on repeating and explaining the “Four Books” and the “Five Classics” lead to the unsuccessful transformation of science and technology innovation mode. No doubt this interpretation comes to the point that China’s backwardness is resulted from the failure to modern technological innovation. But what still needs to be explained is that why China has such an unparalleled imperial examination system?

The usage of economic theories is their explanatory power; the core is their logic consistence. Therefore, a theory to better demystify the “Needham Puzzle” should explain both the history and the reality correlated to the history, and have no missing part of the entire theoretical loops. In other words, it cannot change one proposition to another and then come to an end. For example, if the question why China has such an unparalleled imperial examination system is not reasonably answered, the issue is actually not solved. Besides, the “Needham Puzzle” that why China loses its leading science position is proposed on the comparison between China and the West, then the theory should reveal the related material differences rather than paradoxical differences between China and the West.

In a typical society before the Industrial Revolution, the normal state of economic development is Malthusian vicious cycle of poverty or per capita income repeatedly falls down to the subsistence level. But once opportunities for the Industrial Revolution, even the occasional opportunities are coming, the accumulation of material capital, human capital and technology advancement to the critical minimum level for catching opportunities determines the breakthrough of the Industrial Revolution in a country. Therefore, we try to observe the differences between China and the West in the society prior to the Industrial Revolution from the macroscopic and longspan perspectives in order to find out the reasonable explanations to “Needham Puzzle”.

In the economy lingering over the subsistence level, the scales of thousands of agricultural families even handicraft families are almost the same. All achievements of “potatoes” are eventually to maintain a high or low subsistence level, thus they

³Maddison (2009).

are just production modes to constitute a high-level or low-level equilibrium trap. Individual economic units are impossible to have the critical minimum efforts to break the low-level equilibrium trap. Whether capital accumulation and technological advancement are benefited from the functions of the economies higher than families, like feudal lord economy, village economy and national economy determines the outcomes of different economic development. Exactly on this level, the West and China have great divergence.

During the process of development of the western feudal system, the relation between the monarch and the local lords is typically feudal, the former enfeoffing lands to war heroes and the noble, while the latter restricting their activities to the designated lands, setting up a separatist regime by force of arms and developing into self-sufficient closed economies. As return, the monarch requests the local lords and the noble to render a service to wars, especially when permanent state armies are not established. The feudal lords providing military services as knights or leaders of armed forces and coming to serve as soon as called reflects the contractual relationship between the monarch and the feudal lords.

The mutual benefits of land-focused property and military service are implicitly or explicitly settled in form of contracts and also confirm the validity of the monarchy. In other words, the validity or legitimacy of the monarchy is always vulnerable but generally guaranteed by the contractual relationship thanks to the reciprocity and mutual benefits.

The feudal lords with enfeoffment resources also have valid property rights. The economic growth and resource appreciation arising from their enfeoffment are protected by the property rights. Therefore, the feudal lords are the hierarchy close to economic activities and gaining direct benefits out of these activities. They are stable stimulus to promote seignorial economic prosperity. Besides, even the unstable factors of property rights also stimulate the economy. In most cases, foreign invasion and neighboring lords' plunder are likely to cause property damage and even loss. Thus, building castles as strong as possible by maximum economic strength and technological capabilities is the only effective way to protect private properties. The capabilities either to protect homelands or seize territories are closely correlated with the economic development of the manors.

The church has many similarities with the feudal relationship mentioned above in aspects of economic activities. Priests diligently transcribe the religious classics and make incomparable contributions to preservation and transmission of classic sciences, culture and arts in that ancient time when printing business was underdeveloped and most people were illiterate. One special thing worthy of mentioning is the eternal dream of all local church leaders to construct magnificent and ever-lasting churches, which require accumulation of material capitals and also recruitment, encouragement and cultivation of human capitals. Once a church is constructed, it means a new business center whose promotion to local commodity economy is much better than those profitable economic activities.

Under such an institutional framework, the elite class could enter into the governing class either by fighting for the King to get enfeoffment or by increasing their fortunes through becoming local economic organizers even senior monks or

robberies or nibble of other manors’ fortunes. This is objectively a strong stimulus to local economic development.

By far, the most important factor correlated with human capital accumulation has been revealed. The relationship between the King and the feudal lords is more like a reciprocal contract where the validity of the monarchy is rooted. It’s unnecessary to have a system to bother feudal lords to express their loyalty. This is why the early Western society has no such a system as the imperial examination system hindering human capital accumulation.

Once there are stimulus for economic development and prosperity within specific areas, the requisite institutional conditions, according to Douglass North, would develop into the trend where private benefit is closer to social benefit, and then the institutional environment supporting productive economic activities would be formed, so material capital and human capital required for the Industrial Revolution would be accumulated. In fact, in a specific period, they already exist, it just needs a little luck and the perfect timing.

Compared with the West, Chinese feudal society is untypical. In the very earlier period, the grand-unified Central Empire is established. As the emperor is too far away, the central government is not engaged in general productive activities, except mobilizing national power to construct necessary infrastructure like defensive great walls and large water conservancy facilities, and organizing economic activities. Local governments, just as local agencies of the central government, are only responsible to the central government and have no direct interests in local economies. Therefore, the economic development is actually the mix of separate economic activities of households.

As this typical small-scale peasant economy (landlord economy usually is expressed as individual tenant economy) is very flexible and vigorous, many systems like free trade of lands help promote economic activities. But it lacks a medium class with direct interests and economy of scale to organize and encourage technological innovations, leading to impedance of material capital accumulation, and further the revolutionary-breakthrough technological advancement.

More importantly, the imperial dynasty and local officials and squires are not typical contractual but authoritatively hierarchical. The validity of the imperial dynasty is not based on its reciprocity and mutual benefits with local officials and the nobility. Therefore, the fundamental and sole guarantee of the validity is to establish a feudal ideology and etiquette with the complement of Divine Right of Emperors and central military strength. Under such circumstances, the Confucianism advocating self-restraint and restoration of rites becomes the dominant ideology. After Dong Zhongshu “proscribed all non-Confucian schools of thought and espoused Confucianism as the orthodox state ideology” in the Western Han Dynasty, the imperial examination system whose sole usage was to elaborate the ideology of the governing class and express loyalty was established in the Sui and Tang Dynasties and well-reasoned to last for over 1,000 years.

This imperial examination system is an open official selection system, guiding all elites (also the potential trouble-makers) to elbow through the single-log bridge of imperial examination to enter into the governing class. With such an elite

selection system, the elite find the path to recognize the dominant ideology, verify the validity of the imperial dynasty, express their loyalty to this system and get themselves promoted, while science and technology and crafting skills are seen as clever tricks and wicked craft, shame to speak of. Thus, the imperial examination system blocks the path of human capital accumulation beneficial to technological innovations.

It's true that kinds of technological innovations are created anytime in the productive activities. In the country with an enormous population, there are plenty of such officials or squires and even normal craftsmen passionate for scientific exploration that they have made tremendous contributions to human civilization accumulation. But these are not the mainstream inspirations of the intellectual. The creation of direct knowledge is random and the accumulation of indirect knowledge is discontinuous. Neither is enough to reach the critical level of the science and technology revolution, so the industrial revolution is impossible to spontaneously burst in an appropriate time.

After the macroscopic comparison of the modes of material capital and human capital accumulation between China and Europe before the Industrial Revolution, it's not difficult to explain why China loses its leading position in economic prosperity and technological development in earlier period and why China is not the hometown of the Industrial Revolution. When the world was in Malthusian poverty trap, China was earlier to move into or always in the high-level trap. When the Europe moved from the low-level trap to the high-level trap and accumulated necessary material capitals and human capitals for the Industrial Revolution, China didn't move into this stage and lost the choice to break out the industrial revolution.

The updated data of the World Bank complementary to Angus Maddison's history data show us the clear rises and falls of China's economic development in past thousands of years (Fig. 10.1). During 1000–1600 AD, China's per capita income was on the average level of the world; as for the economic scale (GDP), China had 1/3 of the world in 1820. From that moment, China fell into a stagnated economy during the “Great Divergence” of the world economy. Its GDP-to-world ratio and per capita GDP to world ratio fell all the way down.

Before the founding of People's Republic of China, China experienced domestic strives and foreign aggression and economic stagnation, and the people were living in misery. From 1820 to 1952, annual growth rate of GDP and per capita GDP was respectively 0.22 % and -0.88 %, but during the same period, the Europe had 1.71 % and 1.03 % respectively. The position of Chinese economy in the world fell to the nadir.

The economic growth in the first 30 years of People's Republic of China was materially affected by the traditional planned economic system and the major policy faults. Rejection to the market system, over-high accumulation rate and industrial structural imbalance resulted in very low improvement on people's livelihood. It failed to catch up and surpass the developed countries and emerging industrial economies, what's worse, its development gap was even widened. In the end China didn't hitchhike in the great convergence of the world economy and lost valuable 30 years to develop its economy. In 1978 there were still 250 million rural populations without adequate food or clothing.

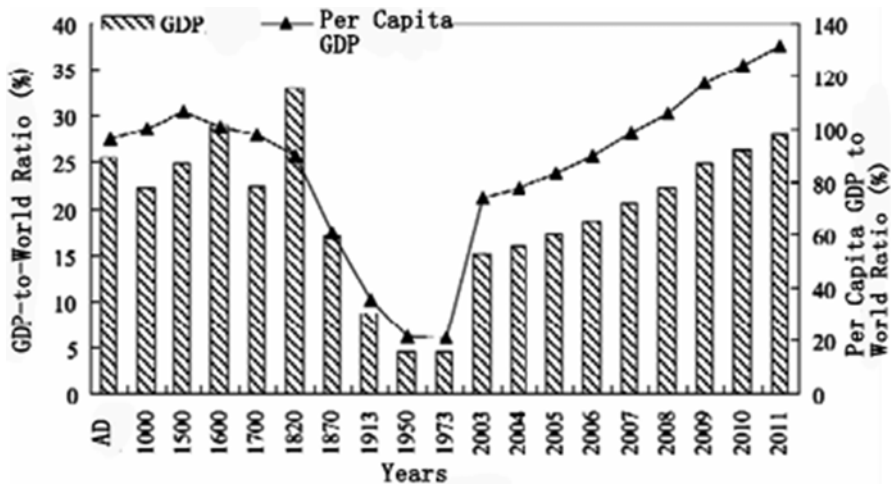


Fig. 10.1 Changes of China-to-world economic ratio (Source: the data before 2003 comes from Angus Maddison, *Contours of the World Economy, 1–2030 AD, Essays in Macro-Economic History*, Oxford University Press, p. 379, table A.4; p. 382, table A.7; the data after 2004 is calculated according to relevant indices recorded in the World Bank’s database <http://data.worldbank.org/>)

After the reform and opening up, the backwardness of China in the “Great Divergence” for centuries was finally changed to the “Great Convergence” towards the developed economies. China started the grand journey to the rejuvenation of Chinese nation and has gained surprising economic and social development achievements, becoming the second economy in the world. Shown as in Fig. 10.1, the reform and opening up is the turning point for Chinese economy to rise from the valley, especially in the twenty-first century, China’s GDP ratio and per capita GDP ratio keep sharp rising in the world. It won’t be long that China becomes the first economy in the world and enters into the rank of high income countries.

10.2 Two “Century Goals”

Witnessing the economic and social development achievements gained since the reform and opening up, Chinese people are more confident. The great renaissance of Chinese nation is neither a theory nor a motivational slogan; it will be definitely promoted steady and fast. Reviewing Deng Xiaoping’s “three-step” strategy, the Party Central Committee’s “the goal of building a moderately prosperous society in all respects” and then the sublime two “century goals”, it represents nothing but a history of Chinese economic development since the reform and opening-up. It also enhances the confidence to attain the goals.

From the late 1970s to the late 1980s, Deng Xiaoping was repeatedly researching, consulting and pondering over the feasibility to attain the goals including “quadrupling”, “a moderately prosperous society” and “\$800 per capita income”. For example, after the Party and state leaders including Deng Xiaoping made a series of investigations of developed, neighboring countries and regions, the goal to achieve four modernizations by the end of the twentieth century was firstly modified as Chinese-style modernization in the practical and realistic way, and then evolved to the concept of “a moderately prosperous society”. The assumption to “quadruple” both the industry and the agriculture in 20 years, proposed by Hubei province in 1980, was developed into the strategic conception of “quadrupling” gross industrial and agricultural output values in 20 years from 1981 to the end of the twentieth century.

In 1983 when meeting the President of the World Bank Alden Clausen, Deng Xiaoping introduced China’s goal of “quadrupling” gross industrial and agricultural output values, and expected the World Bank to organize an economy survey tour to China, make some optional advices on the main issues facing to China in next 20 years in order to attain the abovementioned development goals especially on the basis of the international experience, and make some feasible researches on these goals.

Responding to Deng Xiaoping’s proposal, the World Bank organized a big team to investigate and study the Chinese economy and submitted an economic survey report named as “Issues and Options for Long-term Development” to China government in 1985. This report used modern economic analysis and demonstrated the feasibility of quadrupling in the respects of theory and experience. This report spread far and wide among Chinese economists and policy researchers.⁴

Based on the thorough survey, the demonstration and the economic development practices, the strategic concept of “three-step” was elaborated when Deng Xiaoping met the foreign guests before the 13th National Congress of the Communist Party of China. The 13th CPC National Congress systematically defined the strategic plan of “three-step”: the first step was to double the GDP of 1980 from 1981 to 1990 and solve the problem of food and clothing for our people; the second step was to double it again from 1991 to the end of the twentieth century, thus enabling our people to lead a fairly comfortable life; the third step was by the middle of the twenty-first century to reach the per capita GDP level of moderately developed countries. This would mean that modernization had been basically accomplished and that our people had begun to enjoy a relatively affluent life. In 2050 when it’s the 100th anniversary of the founding of People’s Republic of China, “making China a prosperous, strong, democratic, culturally advanced and harmonious modern socialist country” is one of the two “century goals” set forth in the 18th CPC National Congress.

In 2002 the 16th CPC National Congress made a major decision relating to the reform and opening up and overall modernization drive: based on the original “three-step” strategic plan for modernization drive, the first two decades (2001–2020) should be separated from the first 50 years of the twenty-first century when the third

⁴Edwin Lim (2008).

step is being carried out as a developing period when we need to "concentrate on building a well-off society of higher standard in an all-round way to benefit over one billion people"; and the two decades development will "serve as an inevitable connecting link for attaining the third-step strategic objectives for our modernization drive". "Building a well-off society in all respects" in 2020, the centenary of the Communist Party of China, will be the other "century goal".

The "three-step" strategic plan and two "century goals" proposed by the Party leaders are finally included into the general task to achieve socialist modernization and the great renaissance of the Chinese nation, proposed in the 18th CPC National Congress. On November 29th, 2012 after the closing of the 18th CPC National Congress, the new General Secretary of the Communist Party of China Xi Jinping led the new members of Standing Committee of the Politburo to visit the exhibition of "the Road to Revival" in National Museum of China and firstly proposed the philosophy of "Chinese Dream". He said the greatest dream in modern times for the Chinese nation was to achieve the great renaissance and he was quite confident that this dream would "finally come true". We take "Chinese Dream" as the "colloquial version" of the general task proposed in the 18th CPC National Congress.

Since ancient times, the ordinary people of each nation have expected to live a happy, well-off and safe material and spiritual life. Versions of "dreams" are developed in all countries, though the common people in all countries share similar dreams and expectations. However, the "Chinese Dream" has many differences from the dreams of other countries. The fundamental difference is the path and the means to realize the dream.

As a dreamer emigrating from Europe to the United States, Arnold Schwarzenegger expects one day everyone can spell out his complicated name before he is a Hollywood action celebrity. Finally he succeeds. No matter in entertainment circle or political circle, he is such a real world celebrity that most English speakers can spell out his name now. This is a typically individualistic "American Dream". The "Chinese Dream" is also based on the efforts of millions upon millions of Chinese. The most attractive for the Chinese, however, is the collectivism and the common prosperity contained in this dream. Facing the present challenges for China, adhering to the development is an unyielding principle; making more development achievements to more fairly benefit to all the people is the necessary and sufficient condition for the Chinese Dream.

10.3 China's Version of "Income Doubling Programme"

The "common people's version" of the "Chinese Dream" has quantitative objectives for income increase. The report of the 18th CPC National Congress complies with the trend of the times in making strategic plans of economic construction and people's livelihood improvement, highlights the economic system reform and the economic development mode transition, responds to the new expectations of the masses, and describes the new mission to build a well-off society in all respects.

The new mission and the new requirements on both economic and social construction proposed by this report are based on the scientific development and the transformation of the economic development mode, aim at the people's livelihood improvement and inclusive development, and reflect the reform spirit. They are inspiring and need painstaking efforts. The grand mission and the strategic plan of economic aggregate, resident income increase and people's livelihood improvement can be interpreted as the "income doubling programme" that contains objectives, connotations and realization means, has the characteristics of the times and complies with China's national conditions.

Many people may think of Japan's famous "Income Doubling Programme", which was proposed by Cabinet Ikeda Hayato and carried out from 1961 to 1970 to develop Japanese economy. In 1955 Japanese economy completed the post-war recovery and returned to the prewar normal growth rate. In such background, policy makers expected to formulate an inspiring plan to maintain the high growth rate during the recovery and surpass European and American economies in a faster way. This plan aimed at fueling investment, accelerating technological advancement and promoting high industrialization by stimulating demands, so as to attain the goals of accelerating income growth and improving employment and resident income. During that period, Japan had an over 10 % annual economic growth rate. When the plan was accomplished, Japanese economic aggregate surpassed Germany and France; Japan became the second largest economy after the United States and its per capita income was substantially increased.

The rapid economic growth and the resident income increase achieved after Japan implemented the "income doubling programme" make many people feel excited and yearn for such a similar programme to make China leap into the developed countries. However, when Japan's successful experience is learnt, its failure lessons should also be learnt. Besides, its comparability with China should be paid attention to.

Japanese economy achieved rapid growth during that period, but this surpassing strategy also led to inflation and fueled the disadvantages of excessive intervention of the government and the potential risks of excessive investments. As it is, the implementation of this plan foreshadows the substantial economic decline later. In addition, as discussed in Chap. 5, Japan in 1960s is incomparable to China in present economic development stage, so the development constraint factors for two countries are quite different.

The China's version of "Income Doubling Programme" set forth at the 18th CPC National Congress is not just a copy or a duplication of Japan's "Income Doubling Programme", but direct at China's present development stage, constraint factors and main tasks.

First, the 18th CPC National Congress does set forth the quantitative objectives of economic growth. The Party Central Committee proposes the goal to double 2010 GDP by 2020, from 40.15 trillion yuan to 80.3 trillion yuan if prices remain unchanged. This goal is inspiring and attainable, only if GDP increases at an annual rate somewhat lower than 7 % from 2011. Considering the annual population growth rate from 2010 to 2020 is less likely to exceed 0.3 %, if GDP increases 7.2 % per

year, per capita GDP would double, increasing from \$4,382 in 2010 to \$8,764 in 2020 at comparable prices. It's also an expectable goal.

The doubling goal set forth at the 18th CPC National Congress is not a simple reiteration of quadrupling the GDP of 2000 by 2020 set at the 17th CPC National Congress, but is based on the higher level of per capita income reached in last 5 years from the 17th to 18th CPC National Congress. Accomplishing this task means by 2020 China's per capita GDP is much closer to \$11,906, the threshold of high income countries defined by the World Bank. It will lay a decisive foundation for attaining the third goal of Deng Xiaoping's "three-step" strategic plan that China reaches the level of medium developed countries by the middle of the twenty-first century.

It should be noted that the report of the 18th CPC National Congress doesn't focus on the growth rate itself, but emphasizes that doubling is based on the intensification of balanced, coordinative and sustainable development. The determined quantitative indices leave enough room for future economic growth and avoid traditional modes for economic advancement. In fact, no matter GDP or doubling per capita GDP, their required growth rates are lower than the average growth rate in past 10 even 30 years.

However, it's not extremely easy to realize doubling the GDP of 2010 by 2020. As stated in previous chapters, the potential growth rate is estimated to decline year by year from the 12th "Five-Year" period, and drop to 5.6 % in the last year of 2020. To achieve the goal of doubling, promoting the economic system reform and discovering new growth sources will be only way.

Interestingly, when Japan made the "income doubling programme", its original intention was not to gain a faster economic growth rate as what it actually is later. In fact, some of the plan-makers were intended to plan a more stable growth rate according to the circumstances after the rapid growth in post-war recovery, but the decision-makers were finally inclined to promote a faster rate.⁵ What the superior favors will receive excessively enthusiastic responses from his subordinates. Japan eventually achieved rapid economic growth from 1961 to 1970. Whether it's a fortune or misfortune, it's not conclusive. China's GDP doubling goal echoes with the estimated average annual growth rate 7 % in the 12th "Five-Year" period.

Second, the goal of doubling per capita income of urban and rural residents is much closer to the expectation of the masses. When GDP is doubled, doubling the income of urban and rural residents means higher requirements on the national income distribution that not only the growth of resident income synchronizes with the economic development, but also the growth of resident income becomes faster than the economic growth rate in the period prior to 2020. The achievement of this goal depends on restructuring the national income distribution and substantially increasing the ratio of resident income to national income.

The common saying that Japan is a high income equalization country is not completely correct. Since the implementation of the income doubling programme, Japanese economic growth has increasingly depended on large-scale investments

⁵Miyazaki Isamu (2009).

and large enterprises, which are the main forces to promote heavy industrialization. Such a growth mode naturally results in the widened gap of income distribution. Actually why people have the impression of fairly equalized income distribution in Japan is that they neglect the income distribution status before the government carries out redistribution. In fact, the Gini coefficient of Japanese primary distribution in 1967 was 0.375 and dropped down to 0.328 after the redistribution, 12.6 % improved; the Gini coefficient of primary distribution in 2008 was 0.532 and dropped down to 0.376 after the redistribution, 29.3 % improved.⁶

China's income doubling programme also pays high attention to the income distribution and emphasizes that to make all the people share the achievements of economic development more fully and equally, it needs sustainable increase of per capita income and increasing improvement on income distribution as well as narrowed gap between the income and the basic public service sharing. The task to deepen the reform of income distribution system proposed at the 18th CPC National Congress is directed against inequality, unfairness and untransparency of gaining resources and opportunities, which is also the significant reason of wealth disparity and unequal income distribution. The congress report emphasizes that we should establish a mechanism for equitable sharing of proceeds from public resource transfers, reform the land expropriation system and increase the share of gain in land value to farmers.

10.4 Connotations of Modernization

If the “great renaissance of the Chinese nation” is interpreted as Chinese people base themselves on the history and expect to realize the “Chinese Dream” by the middle of this century, modernization is a definition of Chinese tasks based on the more universal context. It's generally believed that the deep-going change process that every country has experienced or strived to explore since the Industrial Revolution and that involves all circles of social life are so-called modernization. This process takes some existing features as the symbols of the end or the periodic end after all, indicating a society has completed the transformation from traditional to modern. Thus, modernization is a process and an objective as well.

“Making China a prosperous, strong, democratic, culturally advanced and harmonious modern socialist country”, stated at the 18th CPC National Congress, concludes modernization as an objective. As an objective to fight for, comprehensive understanding of its connotations has the ideological significance of inspiration and also the practical significance of guidance and process standardization. Academically speaking, revealing the indispensable elements for modernization especially for the great power, and the challenges that China faces when approaching the goal of modernization, help promote the construction of a modern socialist country with Chinese characteristics and achieve the goals at the scheduled time.

⁶Sun Zhangwei (2013).

One of the connotations of modernization is that building a “prosperous and strong country” is symbolized by hard power or comprehensive national power. By far, people still take GDP as the most general index to measure the wealth and the production capacity of one country. If consulting the growth rate in past over 30 years since the reform and opening up, China’s GDP will undoubtedly surpass the USA in short time and China will become the first largest economy in the world. The International Monetary Fund (IMF) estimates China’s economic aggregate will surpass the USA in 2016, when China’s GDP, calculated at purchasing power parity (PPP) will be 102 % of the America’s GDP. As to per capita GDP, of course, China is only 24 % of America and still in the medium income stage.⁷

Actually, it matters little in which year China will surpass the USA and become the largest economy in the world, or the year comes sooner or later. In the past 31 years from 1980 to 2011, the arithmetic mean value of annual GDP growth rate is 2.6 % in the USA while 10.0 % in China. If this growth gap continues, or even if a reasonable decline of China’s economy growth is assumed according to its decrease tendency of potential growth rate, China will eventually surpass the USA.

The human development index (HDI) advocated by the United Nations combines per capita income, resident health and education together and reflects the economic development level, inclusion and sharing in a more comprehensive way. In 2010 China’s HDI was 0.663, ranking No. 89 in the world. It was a medium level of human development.

This ranking is a little ahead of its per capita GDP ranking. Some other countries have their HDI ranking far ahead of their per capita GDP ranking, which means on the same economic development level, it inclines to the human development level according to the priority. In fact, during the period when Chinese economy slows down, the social development is more focused on and human capital input is also enhanced. Improvement of human development could better achieve the development goals.

Most importantly, the lessons drawn from many medium income countries in corresponding period should be learnt to prevent abnormal recession and avoid the medium income trap. Thus, it’s useless to carry on conservative strategies as before. The international experience and lectures tell us once a country is in the transition from medium income to high income, series of measures that used to help break the poverty trap and enter into medium income level are not effective any more. Reforming the institutional factors impeding productivity improvement, transforming the economic development mode and eliminating the institutional defects weakening the cohesiveness are unavoidable tasks for China to accomplish modernization.

Another symbol of hard power is the science and technology and the innovation capability. When China becomes an economic giant, it also takes more efforts to ascend to a scientific and technological giant and has already gained tremendous achievements. For long, our press keeps reporting some technological breakthroughs

⁷International Monetary Fund: <http://www.imf.org/external/data.htm>

to inspire our national pride, but as a medium income country, some facts that we do take the lead of some technological fields don't represent our comprehensive position in the world's technology. On the other hand, it's more like news when it's assessed by more comprehensive indices, some of which reflect the true side of efforts, achievements and deficiencies when China implements the strategies for making it strong by developing science and education.

From 1995 to 2011, China's R&D expenditure ratio to GDP was increased by 7.3 % per year. Considering its unparalleled GDP growth rate in the world during the same period, it's conceived how much China has input into the science and technology in these years. The input has many tangible consequences, for example, the quantity of published scientific papers and applied patents of China comes out worldwide top.

Aggregate indices are quite persuasive but also limited, especially to China. Further analysis shows China is far behind of developed countries and even many developing countries in aspect of quotation of its published papers and applied patents. For example, speaking of the proportion of the ratio of quoted scientific papers to the ratio of published scientific papers, China is only 25 % of the scientifically cutting-edged Switzerland, even behind of South Africa, Mexico and Brazil.⁸

After massive increases in scientific and technological input, we should reflect what the goal of scientific and technological input is, what the law of scientific and technological innovation is and who the innovator is. Philip Campbell, the chief editor of *Nature*, a British magazine, has a targeted saying – “science is not a contest”. Scientific and technological development is to lay a foundation for sustainable economic development. The solidness of this foundation is not just piled up by money but by innovations of thousands of individuals, enterprises and institutions.

Innovation, since its invention by Economist Joseph A. Schumpeter, has been correlated with creative destruction. Innovation may succeed or fail, and destruction is bound to follow creation. The Third Industrial Revolution or the Third Scientific and Technological Tide people delightedly talk about has a distinguished feature that computer and information technology has changed the mode that how people organize innovation activities and commercialize products and services. But this new tide doesn't change the creative destruction nature of scientific and technological innovation, but somehow enhances this nature. Therefore, science and technology represents the overall national power; innovations to improve the national power need initiative exploration and consequence undertaking of many individuals.

Soft national power is one of indispensable connotations of modernization. Soft power is firstly proposed by an American scholar and applied into the international relation circle. Some scholars suggest a country should rely more on soft power such as culture and ideology than hard power such as military forces and economic means to gain international influence. Hard power emphasizes who wins the economic war or the military war while soft power focuses on who wins the voice. Some other scholars believe hard power and soft power should be combined together

⁸ Hatakenaka (2010).

as smart power. The latter is accepted by American officials. As it is, for western scholars, no matter hard power, soft power or the combination is the means to play the game of international relation.

Many American politicians and scholars are worried about the rise of China. For example, in June 2013 when Chinese Chairman Xi Jinping visited America, Graham T. Allison, a scholar of Harvard University published an article in the press, believing both China and America are facing a so-called “Thucydides’s trap”. Over 2000 years ago, the Athenian general and historian Thucydides said in his *History of the Peloponnesian War* that the long-lasting and tragic Peloponnesian war arose from the rise of Athens and the fear caused in Sparta. Allison also enumerated many other historical facts to prove the “Thucydides’s trap” did exist in the history of the relationship between giant countries.⁹

As the western society is worried about even fear the rise of China, clearing the air and boosting win-win confidence should rely on the enhancement of Chinese soft power. It’s not about who play hardball, whose fresh words are faddish, which PSY is imitated by more people, but about whose rules are broadly accepted and complied with.

Actually even if the international relation circle is not involved, a country also faces the task to enhance soft national power during its modernization. Charisma and popularity of national culture is indeed a part of soft power, but the stronger social cohesiveness, the widely resonated values and the universally accepted voice are more material symbols of soft power of a country. Soft power is a benchmark of modernization, and also creates more favorable internal and external environments for the rise of a nation.

10.5 Climbing Growth and Difficulty Overcoming

For the European and American countries which are the first to achieve modernization, their technological advancement is made step by step, with no predecessors to learn from, while their per capita income is increased in the slow and time-consuming economic growth. On the contrary, thanks to the existence of Advantage of Backwardness, the later mover is able to surpass the first-movers at a faster speed. For example, we use the data summarized by the Economic historian Maddison to compare China with the “rapid developing” giants (Britain, USA and Japan) in different periods in their growth rates.

From 1880 to 1930, Britain had only 0.9 % annual growth rate of per capita GDP. Assuming that the British born in 1880 were expected to live to their 50 years old, according to life expectancy at the time, a British was estimated to improve his livelihood by 56 % throughout his life. The increase in Britain was the first also the most revolutionary breakthrough for the Malthusian poverty trap in thousands of years.

⁹Refer to Allison (2013).

USA becomes another modern power after Britain and other western European countries. During the period from 1920 to 1975 when it was surpassing Britain, USA had only 2 % growth rate of per capita GDP. Assuming that the American born in 1920 were expected to live to their 55 years old, an American would improve his livelihood by almost 100 % throughout his life. Unusually USA maintained the similar growth rate in its following economic development and is by far the most powerful nation and has the highest living standard in the world.

Japan is the next country to successfully surpass its predecessors and the first Asian country to realize modernization. From 1950 to 2010, Japan had over 4 % annual growth rate of per capita GDP. Assuming that the Japanese born in 1950 were expected to live to their 60 years old, a Japanese would improve his livelihood by almost 1,000 % throughout his life. However, Japanese economic performance after 1990 had nothing good to show off, and its income increase was staggering.

Since the early 1980s, the reform and opening up has driven China to the track of rapid economic growth. During the 30 years from 1981 to 2011, the annual growth rate of China's per capita GDP was 6.6 %, which means Chinese living standard increased nearly 500 % since the reform and opening up. Assuming that the Chinese born in 1981 are expected to live to their 68 years old in 2049, the centenary of founding of People's Republic of China, and if the previous growth rate is maintained, a typical post-1980s Chinese will improve his livelihood by up to 73 times throughout his life.

No matter in horizontal or vertical comparison, the Chinese has by far experienced the unparalleled speed of income improvement. This is already happened. However, it's not realistic to maintain such growth rate in the following decades. The 2010 population census estimates China's total population will reach the peak value of 1.38 billion in 2022 and start to experience absolute reduction hereafter. It contributes to the increase of per capita income, but also has such negative effects on the future economic growth that the demographic dividend represented by the changes of working-age population and dependency ratio disappeared in 2010, so the economic growth is consequently to slow down.

We are proud that the high level Chinese economy has reached is a surprising achievement and also vigilant it's an unprecedented challenge. From now on, Chinese economy will experience the climbing economic growth and have to overcome all difficulties in the institutional reform.

In a higher-level development stage and on a larger base, the economic growth of a country will definitely experience increasing marginal difficulty and decreasing marginal effects. With the improvement of overall national power, the dramatic gap between China and the cutting-edged developed countries has been narrowed down in terms of science, technology, management, market maturity and industrial structure, although not been completely removed. It means the advantage of backwardness available for Chinese economic growth is not as significant as it was in previous development stage.

This change has double meanings. One is since then Chinese economic growth relies more on technological and institutional innovations, updated industrial structure and TFP improvement. Only then will the growth quality especially the

inclusion of development be much better, though the growth rate will slow down in future. The other is, as discovered by Gerschenkron, the initiator of the theory of Advantage of Backwardness, the later movers incline to excessive intervention of governments and rely more on big enterprises and unbalanced industrial structure during the surpassing process and their corresponding institutional patterns are thus established.¹⁰ Therefore, when the advantage of backwardness weakens, the tough institutional transformation will be the premise of the transformation of the mode of economic development.

The innovation process has potential failure risks; industrial restructuring won't be that all enterprises keep pace of updating. On the contrary, it's the period when innovation and restructure reform is accelerated that it's more likely to have the fittest survive. It means those conservative and stubborn investors and enterprises and those who make mistakes in decision-making will be expelled from the market by competitors, but in the period when innovation-driven TFP improvement becomes the only source of economic growth, such development consequences are unavoidable. Governments need to build a social security network to protect the uncompetitive labors, but shouldn't protect backward economic activities; otherwise the creative destruction mechanism will be injured.

Tough competitions and potential failures may spur some enterprises and sectors to seek for protection and even attempt to stop necessary institutional reforms. Those institutional obstacles safeguarding vested interests will definitely further impede the sustainable economic growth and finally lead to worse slowdown or even economic stagnation. Therefore, to keep long-term sustainable economic growth of China and realize the unprecedented great renaissance of Chinese nation, it needs to break through barriers from explicit and implicit vested interest groups and promote reforms on important areas with more political courage and wisdom to gain necessary institutional dividends when demographic dividends disappear.

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¹⁰Gerschenkron (2012).

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